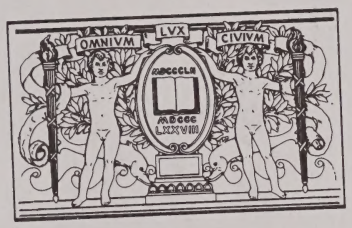

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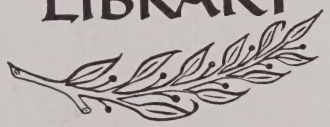

WORKING DRAFT

February 18, 2000

Section I: Overview; Section II: Context; and Section III: Analysis are included in this package for review and comments. These three sections will be discussed at the Thursday, February 24th, SDSC public meeting. For purposes of clarity, the two sections of the report previously distributed that were discussed at the January 26th SDSC public meeting have now been combined into one; Section IV: Implementation: Principles, Guidelines, Selecting Developers. The new outline below represents the most current organization of the report.

A Civic Vision for Turnpike Air Rights in Boston

- Bay Village
- South End
- Urban Design

4. Public Realm and Open Space
   - Users of the Public Realm
   - Districts
   - Open Space Corridors
   - Views of Boston
   - Connections- Streets and Bridges
5. Transportation

III. Analysis: Forces that Shape the Civic Vision and Guidelines

A. Public Realm/ Urban Design

For each district:

- Location
- Districts
- Streets and Walks
- Open Space

B. Technical Challenges and Economic Feasibility

- Cost Premiums
- Land Values
- Boston Real Estate Trends
- Land value
- Other Feasibility Issues
- How Should the Economics of Air Rights Proposals be Assessed?
- Planning and Design Issues Raised by Specific Uses
- Site Planning
- Representing the Market

C. Transportation

- Transportation
- Goals
- East/West Connections
- Air Rights Development
- Analysis by District

D. Environmental (**TO BE WRITTEN**)

1. Air quality
2. Water table
3. Noise

E. Goals for the Use of Air Rights in each District: Mission Statements for Air Rights

IV. Implementation: Principles, Guidelines, Selecting Developers

A. Civic Vision
B. Guidelines
C. Selecting Developers

Acknowledgements
Credits
Appendices

WORKING DRAFT

I. OVERVIEW

Background

In the Fall of 1998, Boston Mayor Thomas M. Menino appointed a Strategic Development Study Committee ("SDSC" or "the Committee") of concerned citizens. He charged this committee with the task of creating a vision and strategy for the use of air rights over the Turnpike's entire route through Boston. This task takes on increased importance because the state legislature had exempted Turnpike air rights in Boston from local zoning—the customary method for determining the use, scale, and other key parameters of development in Boston. The City will play a central role in shaping the course of this significant development in enhancing or diminishing the livability of the city and its neighborhoods. The Mayor charged the SDSC to create development Guidelines that the City could use to assess proposals on the new "land" created by air rights development.

In this document, the SDSC responds to Mayor Menino's challenge and puts forth a bold and achievable *civic vision*—translated into Guidelines—to govern the use of air rights. While the opportunities and challenges facing the city and its neighborhoods change over time, along with real estate markets and the technology of air rights construction, the SDSC has identified fundamental values that should inform a *civic vision* in any economy and across the length of the Turnpike in Boston. At its most basic level, this *vision* is simple: **heal the physical, social and economic breach presented by the Turnpike's cut through Boston**. Woven into this vision are four mutually reinforcing perspectives that touch at the very core of enhancing Boston as a livable city:

- Reinforce the vitality and quality of life in adjacent neighborhoods.
- Enhance Boston as a place to live, work, and invest.
- Repair and enrich Boston's public realm.
- Foster increased use and capacity of public transportation and decreased reliance on private automobiles.

The Strategic Development Study Committee

The 26-member SDSC saw its mission as creating a legacy for future generations of "found land" to be used to unlock enhanced quality of life and economic opportunity for Boston and its neighborhoods. The Mayor appointed David Lee, FAIA, a prominent Boston architect and urban designer, to chair the SDSC. The other 25 members represented a highly diverse group of dedicated volunteers drawn from Chinatown to Allston, other stakeholder groups, and elected officials; Chairman Kerasiotes of the Massachusetts Turnpike Authority ("MTA") nominated half of the members. In asking members to serve on the Committee, the Mayor described the Committee's planning process as:

> "an important opportunity to re-connect many of the city's neighborhoods and provide economic benefits for Boston's residents and business…[that] will ensure an innovative vision…"

The SDSC members spent many hours in public meetings and other forums sharing their perspectives and working together. They met with hundreds of people from local communities; elected officials; and representatives from the Boston Redevelopment Authority ("BRA"), the Boston Transportation Department ("BTD"), and the MTA. These agencies, together with a large multidisciplinary consultant team lead by Goody, Clancy & Associates, provided support to the

SDSC throughout its deliberations. Both the City of Boston and the MTA made it clear from the start that the SDSC was an independent body and that neither entity would direct the SDSC's findings.

The SDSC Members

M. David Lee (chair)
Peter Bassett
Pamela Beale
Robert Carporale
Christine Colley
Cheryl Cronin
Will Davis
Edward Dugger, III
Nan Myerson Evans
Mark Goldweitz
Monsignor Michael Groden
George Hagerty
Janet Hurwitz
Cynthia Keliher
Sue Ellen Kent
David Lapin
Brighton Lew
Paul Malnati
Fred Mauet
William G. Morton, Jr.
Daniel Mullin
Terri North
Paul Roiff
Mary Soo Hoo
Martha Walz
Steven Wolf

Ex Officio Members

Honorable Paul Demakis, State Representative

Honorable Byron Rushing, State Representative

Honorable Stephen Lynch, State Senator

Honorable Dianne Wilkerson, State Senator

Councilor Michael Ross, Boston City Council

Former Councilor Thomas Keane, Boston City Council

Thomas B. Concannon, Chairman, Metropolitan Highway System Advisory Board

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A. Introduction

Through extensive discussions, the SDSC forged this *civic vision* and Guidelines with the City of Boston, the MTA, and the community. The SDSC encountered sharp differences over questions of financial feasibility, impacts on neighborhoods, the adequacy of Boston's transportation system to handle new development, the need for public open space, and other difficult issues. The members of the SDSC worked to reach positions that, in the Chair's words, "balance public purpose and economic feasibility, neighborhood concerns and citywide vitality".

Because the members of the SDSC so highly value the special qualities that define Boston and its neighborhoods, the Committee believes it is essential that all air rights development be based on three **basic premises**:

- Given the cost premiums related to air rights, the right balance between economic feasibility and public benefits provided in the Guidelines may only be achievable during strong real estate cycles—future decision-makers should not undermine these Guidelines in an effort to encourage development in a weak real estate market.
- Given Boston's congested local streets and strained public transportation, the City of Boston and the MTA should work with the Massachusetts Bay Transit Authority ("MBTA") to improve public transportation to sustain air rights development.
- Given the scarcity of public open space in some neighborhoods, the City of Boston and the MTA should work to secure funding for a variety of public parks, squares, pedestrian connections, and other types of open space essential to the livability of Boston's dense urban neighborhoods.

How should this *civic vision* be used?

As anticipated by Mayor Menino, the *civic vision* and Guidelines will become the City of Boston's adopted plan for the use of air rights. Under the Memorandum of Understanding ("MOU") signed by Mayor Menino and Chairman Kerasiotes of the MTA in June, 1997, the Mayor will appoint a Citizens Advisory Committee ("CAC") to review each air rights proposal. This *civic vision* will provide a framework for the CAC and the City of Boston to review air rights proposals. Conversely, proponents of air rights projects should understand the *vision* and use the Guidelines to shape their proposals.

In shaping the *vision* and Guidelines, the SDSC had the benefit of an early test case. Concurrently with the SDSC's work, the first CAC, appointed by the Mayor in November 1998, has been reviewing the first air rights proposal to come forth in accordance with the MOU—a substantial and controversial mixed-use proposal for Parcels 11-13. The experience of this first CAC, which was chaired by Cheryl Cronin and composed of 11 members of the SDSC, provided the SDSC with important insights into the issues that proponents should consider in shaping air rights proposals, the kind of vision and guidelines that will be of most value to future CACs as they review proposals, and the most effective way for proposals to be brought to the public's attention. The SDSC also realized that future CACs will need technical support, both from the City of Boston and from consultants funded by the project proponents (a common practice in this region), to evaluate complex air rights proposals and suggest appropriate modifications.

Why Create a *civic vision* now?

WORKING DRAFT

The Massachusetts Turnpike ("the Turnpike")was planned in the 1950s to revive Boston's depressed economy and provide badly needed access to downtown. As the city's economy revived in the 1970s and 1980s, however, the civic cost of the Turnpike's open cut – divided neighborhoods, the loss of badly needed land, the introduction of pollution on the doorsteps of thousands of residents – became unacceptable.

While these problems were critical, the economy at that time could not support air rights development. Such proposals foundered on high development costs and the absence of any substantial public subsidy. This dynamic has changed in recent years as a scarcity of land and rising land values have made such projects economically viable.

The creation of the South End and the Back Bay illustrates Boston's long tradition of reclaiming land during prosperous times. As the economy booms, and Boston searches for new sites to meet the need for diverse housing opportunities, public facilities, research facilities, and private investments, the air rights parcels take on a new significance. All along the Turnpike corridor, extraordinary opportunities exist that could not be realized without using air rights. Once only a dream, the ability to use air rights productively has become a reality.

Air rights Parcels

The MTA has organized air rights into 23 parcels—generally defined by bridges or natural boundaries. These Parcels group into five "districts" which correspond to the traditional neighborhoods that line the Turnpike and which represent the immediate context in which to plan for air rights:

- **Allston-Brighton, Audubon Circle, Boston University:** Parcel 1 and 4-6 (Parcels 2 and 3 are located in Brookline and their use is governed by Brookline's local zoning)
- **Audubon Circle, Kenmore Square, Fenway:** Parcels 7-10
- **Fenway, Back Bay:** Parcels 11-15
- **Back Bay, South End, Bay Village**: Parcels 16-19
- **Bay Village, Chinatown, South End**: Parcels 20-23

B. Summary of Findings

Context: The Setting for this *vision*

To create the *civic vision* and Guidelines, the SDSC began by learning much more about the opportunities and challenges facing each neighborhood and the City of Boston as a whole. Four critical perspectives arose from this process and form the basis of the Committee's air rights approach:

- The corridor is well served by public transportation which has fueled intense economic growth creating steadily increasing strains on the **transportation** system. Rising local traffic levels, and the capacity constraints on the Green Line affect the Corridor's capacity for new development. In the view of some, the turnpike lacks adequate connections to the north and east. Improving transportation must be a fundamental consideration in air rights planning.
- The **diverse and historic communities** that line the Turnpike together house more than a quarter of Boston's population and represent many of the city's most historic and vital neighborhoods. Perhaps more than any others, these neighborhoods have endured the costs and enjoyed the benefits of changes that have occurred over the past two decades. The costs are visible—congested streets; housing shortages (the 1999 residential vacancy rates were under 1%); and displacement of long-time residents in the face of surging housing costs. The

benefits are just as striking—dramatic improvements in unemployment rate and income levels (instead of lagging, Boston now far exceeds national norms); and vibrant main streets (empty storefronts have largely disappeared). Finding the right balance between the costs and benefits of significant air rights projects will be central to the quality of life of these communities.

- Even more than many other major American cities, **Boston as a whole** continues to face dramatic new opportunities and challenges. As the pace of economic change continues to quicken, Boston increasingly depends on new technologies and research to create new and better jobs. Faced with a continued decline in its share of the region's jobs, the Boston must increasingly compete as a place to live, work, and invest by offering enhanced quality of life (culture, entertainment, open space, housing opportunities, services, urban design) and more competitive infrastructure (particularly transportation). With few available highly competitive development sites (with regional visibility and access), Boston has a stake in the future of air rights development.
- Boston's **public realm**—grand linear parks like the Emerald Necklace and the Charles River Basin, intimate parks and squares, quaint neighborhoods, and lively sidewalks—represents a crucial component of its quality of life. In stark contrast, all along its length, the Turnpike creates windswept gaps, devoid of shops or other pedestrian amenities that divide neighborhoods from each other. To the west, a portion of the Turnpike parallels the Charles River and separates neighborhoods from the region's greatest open space resource. As the Turnpike turns away from the river after Back Bay, it passes through three neighborhoods with little open space and even less available land—Bay Village, Chinatown, and the South End. Enhancing Boston's public realm is a fundamental consideration in planning for air rights.

Analysis: The Forces that shape a *vision*

The SDSC spent more than a year working closely with the City of Boston and the MTA to understand in depth the key forces that will shape the use of air rights over time:

- air rights development must acknowledge significant traffic congestion issues. Substantial public **transportation** investments are needed to relieve this congestion. For most of these parcels, housing—which generates far less traffic than office space—is the most appropriate use, followed by hotels and other uses with low traffic generation. Parking provisions should be reduced in many neighborhoods to encourage increased use of public transportation. CACs will need to examine in detail the traffic and other transportation impacts of each air rights proposal. In addition, new public transportation may be necessary to avoid additional traffic on local streets. Some believe that transportation connections to the emerging South Boston Waterfront are insufficient and therefore regional roadway changes should also be considered.
- **Community and city-building** concerns shape much of the dialog around air rights. As Boston University ("BU") explores ways to respond to pressures for growth and change faced by all academic research institutions, nearby Allston-Brighton and Audubon Circle seek a greater sense of transition between their neighborhoods and the university. Audubon Circle and the Fenway ask that air rights parcels be used for parking facilities that can replace surface parking lots in their neighborhoods and free up these lots for housing and other uses. The Back Bay, the South End, and Bay Village seek to protect historic blocks and quaint streets from the shadows and other impacts of new buildings. Chinatown seeks to provide diverse housing and other facilities to accommodate a bursting population. Everywhere residents worry about increased traffic. The City of Boston seeks to protect its

neighborhoods while addressing shared long-term needs to create jobs, create affordable housing, and welcome appropriate investment.

- Air rights can help achieve longstanding **urban design and public realm** goals: introducing buildings that will fill the gaps in the urban grid between neighborhoods and bring lively street level uses to foster foot traffic between them; creating paths to the Charles River west of Charlesgate; and providing community parks in the neighborhoods that lack land to create parks. Meeting these goals will require an aggressive effort to obtain public and private funds. The design of air rights buildings and open spaces should enhance lively public streets and integrate respect for traditional buildings nearby with an expression of our era's vitality and values. While some advocates argue for a continuous air rights park, this former rail corridor is better suited to forging cross connections between the neighborhoods it has long divided. The costs of creating a linear park would be significant: for example, the cost of creating only one acre of air rights parkland could fund 25-30% of all improvements recommended for almost 9 miles of the Charles River Basin in the Metropolitan District Commission's 2000 Master Plan. The use of public funds to create a linear park would generate pressure for substantial development only in areas with high real estate values and absorb a disproportionate share of potential public dollars.
- Building the decks over the highway for air rights raises significant **financial and engineering feasibility** challenges. Cost premiums for a deck may range from less than $250 per square foot to more than $700 per square foot. In addition, the MTA believes it has the fiduciary responsibility to seek lease fees for the use of air rights for development. air rights present additional feasibility issues related to parking and the long-term costs of maintenance, lighting, and ventilation for the highway below. Even in 1999's strong economy, development costs on air rights sites exceeded those on terra firma sites creating pressure for high value uses (in 1999—high end residential, research, hotels, retail) and larger projects. In the 1999 boom economy, the competitive cost of nearby terra firma sites has rose to the point at which air rights projects are being proposed where real estate values are highest—around Parcels 12-18. For other parcels, special circumstances can make air rights feasible. Examples include an abutter such as BU for Parcels 1 and 4-6; unique research or entertainment uses for Parcels 6-8; and taller buildings to secure a mix of housing opportunities for Chinatown and the South End (consistent with earlier neighborhood planning). For every parcel, balancing feasibility issues and what is appropriate has been a critical SDSC concern and will be a central challenge for future CACs.

The *civic vision*

With an understanding of the context the city and individual neighborhoods present and the forces that shape air rights development, the SDSC created a *civic vision*. **air rights should be used to enhance quality of life and economic opportunity for all Bostonians, by:**

- **Fostering increased use and capacity of public transportation and decreased reliance on private automobiles.** Located along busy sidewalks, heavily trafficked streets, and in communities with Boston's highest percentage of public transit use, air rights development should be accompanied by commitments to: improve the **pedestrian realm**—comfortably wide sidewalks lined with uses that engage pedestrians; **limit parking** to further encourage use of public transportation; expand **public transportation**—critical projects such as improving the Green Line, a commuter rail shuttle, and the Urban Ring; and encourage increased use of **bicycles.** The opportunity should not be lost to address the need for expanded public transit connections to the emerging South Boston waterfront.
- **Reinforcing the vitality and quality of life in adjacent neighborhoods.** Examined and understood neighborhood by neighborhood, air rights should be used to: replace surface parking with housing and relieve pressures for institutional growth in **Allston-Brighton** and **Audubon Circle**; support continued revitalization of **Kenmore Square**; promote diversity and livability in the **Fenway** through support for the arts, affordable housing, and the historic connection to the Charles River; fill in missing links in one of America's most walkable districts to enhance the **Back Bay**; provide community parks and a range of housing opportunities for the **South End, Bay Village, and Chinatown** to connect these three neighborhoods. Everywhere, air rights should be used in appropriate ways that respect scale and character, manage transportation impacts, improve air quality, and support the special aspects of **every neighborhood**.
- **Enhancing Boston as a place to live, work, and invest.** air rights could add significant acreage to a city with almost no available land. air rights should be used to: provide **a mix of housing opportunities**; create a **world class science and technology campus**—a significant step in attracting "industries of the mind" vital to generating economic opportunity; establish important **cultural facilities**—facing the Charles River and at the heart of the Back Bay; and establish **entertainment facilities** at Kenmore Square and Lansdowne Street. Boston would pay a steep price in terms of diminished character and lost opportunity in leaving its air rights unused.
- **Repairing and enriching the city's public realm.** The Turnpike slices across an incredible cross section of the city—historic neighborhoods and post-World War II commercial districts, a national university and Chinatown, quaint streets and grand boulevards. air rights offer opportunities to repair these gaps *and* enrich Boston at almost every turn. Opportunities include creating **common ground** to bring Bostonians together—pedestrian-friendly sidewalks, public parks and squares, cultural facilities; enhancing **civic design quality**—removing the visual impact of a regional highway through Boston's historic midst; bolstering **neighborhood connections**—newly walkable streets lined with shops, cafés, exhibition spaces, and other uses that engage pedestrians; and creating new **links to Boston's premier park systems.**

Implementing the *civic vision*

The SDSC has worked closely with the City of Boston and the MTA, and the larger community, to ensure that the *vision* is translated into an effective process for achieving the tremendous promise that air rights offer. This document includes a public selection process for developers,

the funding of that selection process, the qualities that should be incorporated in every air rights development, and the specific qualities that relate to the special character of each district. The SDSC also recognized that the development of air rights and the planning for their use should include, where appropriate, the infusion of public funds to promote public benefits such as transportation, affordable housing, and public open space. The SDSC acknowledged, however, that the vast majority of funding for air rights development will, out of necessity, come from private sources.

[TEXT BOX: PUBLIC FUNDING MECHANISMS]

Selecting Developers

Early in its deliberations, the SDSC realized that a competitive process for designating developers was critical to achieving the fundamental goal of balancing public benefits and financial feasibility that is inherent in the *civic vision* and Guidelines. The SDSC structured a process to:

- Accommodate appropriate public review and comment on development proposals.
- Allow proponents to explain how they have wrestled with the difficult balance of financial feasibility and public benefit inherent in every air rights project.
- Insure that the entire process of securing air rights development commands credibility as a fair and appropriate way to make decisions about the use of public land.

The successful process used by the MTA to select developers for its nearby Central Artery North Area ("CANA") parcels offers a model of an open and participatory process that can serve as a vital starting point. This process will prove useful in shaping future selection efforts, and can be adapted to meet the spirit of the MOU and the unique challenges of building on air rights. For each air rights project, the MTA should issue Requests for Qualifications that incorporate the Guidelines. The CAC for each project offers the appropriate forum for developers to present their qualifications and proposals to the local communities for public comment. CAC and public comments should be considered, and the Mayor should be consulted, in selecting a short list and then designating a developer.

Guidelines

In translating the *civic vision* into Guidelines that will endure over the years during which the air rights will be developed, the SDSC believes it is essential to set out key premises and principles that inform all of the Guidelines. The SDSC urges all those who use the Guidelines to consider these premises and principles, along with the *vision*, when interpreting the spirit of the Guidelines.

[SEE CORE PRINCIPLES BOX]

The Guidelines should serve as the basis for air rights proposals. Proponents for specific projects may advocate for changes based on economic feasibility, new ideas, or other criteria. The Guidelines respond to certain **opportunities and challenges that are common for all parcels**:

[SEE COMMON PARCEL SUMMARY GRAPHIC]

Other Guidelines focus on the **unique characteristics and needs of each community** along the corridor:

[SEE COMMUNITY SUMMARY GRAPHIC]

C. Next Steps [TO BE HIGHLIGHTED]

Using air rights offers Boston and each of the neighborhoods along the Turnpike tremendous benefits, but only if this development is appropriate and accompanied by the right public initiatives. The SDSC strongly urges that:

- The City and the MTA adopt the *civic vision*, Guidelines, and process for designating air rights developers.
- The City and MTA move aggressively to initiate the critical public transportation improvements addressed in this report.
- The City and MTA also move aggressively to identify public and private funds to support the air rights public realm improvements addressed in this report.
- CACs proceed to use the Guidelines within the framework of the MOU and that the City and MTA provide the essential support CACs will require to review and respond meaningfully to air rights proposals, with proponent developers providing funding for that review.

II. CONTEXT

A. History and its Lessons

To understand the influence of history in planning for Turnpike air rights, it is important to look at two stories that intersect in the work of the SDSC: the Boston extension of the Turnpike and Boston's zoning.

The Boston Extension of the Turnpike

The Boston extension of the Massachusetts Turnpike was built along side the Boston and Albany mainline of the New York Central Railroad. The railroad tracks, which date to 18xx, represented a significant barrier that dictated the street pattern and configuration of entire neighborhoods and formed a barrier dividing the South End from the Back Bay, Bay Village, Chinatown, and downtown. Land adjacent to the railroad became an industrial corridor that further separated neighborhoods and extended almost continuously from downtown to Allston-Brighton.

Efforts to deck over the Turnpike began almost as soon as the extension was completed. In the 1960s, the first major air rights project – the Prudential Center – emerged as the result of Urban Renewal efforts. The Prudential Center was grossly out of scale with its historic neighbors and intensified a growing sentiment that the rail and highway corridor through the heart of the city was unacceptable. Copley Place, planned in the 1970s, illustrated the challenges of developing air rights in the absence of a very strong real estate market. That project shared important characteristics with the Prudential complex—it was out of scale with its neighbors and required public subsidies.

In 1993, the MTA sponsored a comprehensive Development Options study that explored more appropriate urban design and uses for all of the air rights parcels. That study's recommendations—supported at the time by many communities along the Turnpike—did not take into consideration real estate market conditions along the corridor. The SDSC has drawn important lessons from this history: it sees the value of continuing the movement to repair the damage from during earlier eras, the need to look to surrounding blocks for cues in planning and designing of air rights development, and the need to consider financial feasibility.

Zoning

Boston enacted a zoning ordinance to manage its growth and development, a law that after 1924 remained essentially unchanged for decades. With the boom of the 1980s, however, the need to manage growth and zoning again became a topic of significant debate. The BRA launched a series of community-based zoning studies and revised zoning for many of the city's neighborhoods.

Air rights development raises many issues that the City has addressed through zoning, but the law creating the MTA exempts air rights parcels in Boston from zoning. There are differing views as to whether the terra firma that is included in air rights parcels is subject to this exemption. The Legislature required the MTA, after consultation with the Mayor but prior to leasing air rights parcels, to find that that any air rights development "shall preserve and increase the amenities of the community." In 1997, the Legislature required the MTA to enter into an MOU with the City of Boston regarding the review and approval of air rights development.

The SDSC has examined the issues presented by air rights development. The Committee believes that neither the City of Boston and its neighborhoods nor the MTA and potential developers are well served by this current state. It is not clear how the City can fulfill its essential obligation to protect the public welfare where it does not have zoning. At the same time, without the development "rights" that zoning confers, the MTA and potential developers have no clear baseline in terms of uses or scale of development—a situation that leaves large projects particularly vulnerable to opposition. The SDSC believes that the Guidelines should bridge these two positions by providing a clear basis for the City and CACs to review air rights proposals and, equally, establishing a clear baseline as to what can be developed on air rights parcels.

B. The Corridor: Core Opportunities and Challenges that Shape the Use of Air Rights

1. Parcels

Considered collectively, the twenty-three air rights parcels total more than 44 acres of "found" land. They range in size from just under 500 square feet (Parcel 14), the size of a small one bedroom apartment, to well over 171,000 square feet (Parcel 7) which equals approximately 4 acres of land or about the size of the playing field at Fenway Park. In contrast, the surface of the depressed Central Artery totals 27 acres. Boston Common about 48 acres and the Public Garden approximately 26 acres.

The Boston extension of the Massachusetts Turnpike stretches across more than 2.5 miles through the city, and sits adjacent to a broad range of uses, including residential, commercial, and institutional. The Corridor spans from just west of Commonwealth Avenue near the Boston University Bridge to just east of Washington Street, near the I-90/93 interchange in the Chinatown/ South Bay area. In a one half-mile stretch in the Back Bay, existing air rights development includes the John Hancock parking garage, Copley Place Mall, the Prudential Center, and Hynes Convention Center.

For purposes of consistency, the SDSC used the same parcel numbering and boundaries used in previous documents. In considering development, some parcels have been subdivided due to their large size, and others have been considered in conjunction with adjacent vacant land, which has been referred to as terra firma.

[SEE PARCEL MAP]

2. The City

Economic Opportunity

Boston's landscape and skyline have been transformed as the city shifted from being a major port and regional manufacturing center to a vibrant service and technology-based economy. Over the past thirty years, Boston has become a hub for finance, real estate, medical, technology, government, and educational services.

While this shift has lead to overall prosperity, certain sectors of the economy still suffer:

- The long-term loss of port and manufacturing jobs left Boston with few jobs that created real opportunities for people without highly developed skills; the city needs hotel and other "low barrier" jobs that offer a new version of the traditional ladder of opportunity offered by manufacturing jobs.
- As the region recovered from the early 1990s, most new service jobs went to the suburbs and many residents left seeking lower costs. Unlike the boom of the 1980s for example, the city saw relatively little office development in the early 1990s. Boston needs more than ever to take advantage of its status as a leading center for education and venture capital to create jobs and investment tied to the City's long-term strengths as a center for technology and learning.
- Along with other cities across the country, Boston seeks to build on its historic and other resources to claim a share of this country's fast growing visitor industry. After watching our City's share of national tourism drop for more than two decades, Boston needs to expand its limited hotel supply and continue to provide new cultural and other attractions that benefit residents as well as draw visitors.
- A recent study reported housing costs have risen more than 90% since 1995 in many of the neighborhoods along the Turnpike. Spiraling housing costs have caused people to move out of the city. Mayor Menino has made affordable housing a top priority and is requiring a 10% affordable component in every new development.

Planning for air rights should consider the important role many parcels can play in creating economic opportunity but also respecting the needs of nearby neighborhoods.

Institutions

Boston's long-term livability is dependent on the health of both residential neighborhoods and the world-renowned institutions next door. A substantial share of quality new jobs in Boston emanates either directly or indirectly from two institutions near the Turnpike: BU and the Longwood Medical Area (LMA). BU has for years been one of the city's largest employers. The LMA draws more federal research dollars than 44 states. Other institutions along the Turnpike enrich the city in important ways. Berklee College of Music educates more than 4,000 students. Tufts New England Medical Center not only carries on significant research but also provides medical services for a wide spectrum of city residents. A number of air rights parcels can contribute to resolving conflicts between neighborhoods and these institutions.

Urban Design

The creation of more than 200,000 new jobs in downtown and the Back Bay has transformed Boston's skyline and brought an explosion of restaurants, shops, and other pedestrian-friendly uses to the streets of a city that in 1950 appeared by have been bypassed by the 20th century. Without debating the merits of the changes to the city's skyline, it is clear that for most of the Turnpike corridor, building and height and massing should relate to the character of the communities adjacent to the Turnpike. All along the Turnpike, the street levels of new buildings should continue to enliven the pedestrian realm. At either end of the study area, the Turnpike corridor provides sites with the potential to create "gateways" of regional significance—facing onto the Charles River at Parcel 1 and onto the regional highway system at Parcel 23.

3. Neighborhoods

The seven neighborhoods abutting the Boston extension are some of the densest and most desirable urban communities in the region; in fact almost 25% of Boston's population lives within one-half mile of the Turnpike corridor. While the character and demographics of each of these neighborhoods may vary, they do share many of the same concerns, from assuring affordable housing, to easing traffic congestion and parking woes. A brief synopsis of the abutting neighborhoods follows with a summary of their concerns.

Allston-Brighton is bordered by the Charles River, the City of Newton, and the Town of Brookline. The area examined in this study has a more mobile population than other areas of the city, and includes many Boston University, Boston College, and Harvard Business School students. Allston-Brighton residents are concerned with preserving the residential character of their neighborhood, ensuring that Boston University locates new facilities outside of their existing neighborhoods, and creating more homeownership opportunities to encourage long term residents.

Audubon Circle is a compact neighborhood that straddles the Brookline town line and abuts the Massachusetts Turnpike and Boston University. The ongoing expansion of BU has resulted in many housing units in the neighborhood being occupied by university affiliated individuals. As a result, there is a need for additional residential development, which will serve as a permanent replacement for housing units lost to institutional use. Neighborhood residents are concerned about institutional expansion, and are hopeful that air rights development can provide alternative locations for much of this growth while improving connections to the Charles River.

Fenway/ Kenmore Square, bordered by the Charles River, the Town of Brookline, the South End and Mission Hill, and separated from the Back Bay by the Turnpike, was created in 1875. The Fens is a critical link in this chain of green space. While Fenway/ Kenmore has one of the youngest populations in the City, it is a reflection of the high student population and educational institutions in the vicinity. The Turnpike currently acts a barrier, separating Kenmore Square from Fenway Park. As a result, pedestrian circulation in and around the Turnpike is difficult and dangerous. The Turnpike has also blocked open space access and divided the parcel near the Bowker Overpass. Residents in the Fenway/ Kenmore Square neighborhood are particularly interested in maintaining the income diversity that currently exists, avoiding displacement of the arts community, and would like to see new development respect the historic scale and character. The reduction of traffic and parking are also high on their list of concerns, as is the desire to see surface parking lots redeveloped into other uses.

WORKING DRAFT

The **Back Bay** is a historic area of 19th century townhouses bounded by the Charles River, Fenway/ Kenmore, the Boston Public Garden, and the South End. Modeled after the grand boulevards of Paris, the neighborhood is comprised of large, rectangular blocks of bowfront townhouses. While the district is mainly residential, it does contain the Newbury and Boylston Street commercial areas- a major attraction for residents and tourists alike. Several air rights structures currently are located in the Back Bay, including Copley Place, the Prudential Center, Hynes Convention Center, and the John Hancock Garage. The most noticeable impacts of the Turnpike in the Back Bay are at the intersection of Massachusetts Avenue and Boylston Street, where the highway slices through the rowhouse neighborhood. Residents in the Back Bay share many of the same concerns as their neighbors, in Fenway/Kenmore Square.

Chinatown, located adjacent to downtown Boston and bordered by Bay Village and the South End, originated as landfill in the early 1800s. Immigrants of Chinese, Irish, Italian, Jewish, and Syrian decent began to move into the area in the 1840s. The vast majority of the current population, which totals over 5,000, is of Asian decent.

The land uses in Chinatown are mixed, including residential, commercial, and institutional uses such as Tufts Medical School and New England Medical Center. During the 1960s a significant portion of Chinatown's housing was demolished for the construction of the Southeast Expressway and the Turnpike. Chinatown is currently one of the densest residential areas in the city with the least amount of open space. Housing and open space, traffic, safety, congestion, and the environmental effects of the highway (particularly noise and pollution) are major neighborhood concerns.

Bay Village is a historic neighborhood adjacent to Chinatown and the Back Bay and is separated from the South End by the Turnpike. Development in Bay Village began in the 1830s after the tidal flats were filled. The area was originally called the Church Street district in the 1860s when the entire neighborhood was raised 18 feet above the mean low water level. After years of physical deterioration and economic difficulties, the 1960s brought revitalization to Bay Village with new public improvements and rehabilitation of existing buildings. Most of the buildings in the neighborhood are narrow, two or three-story red brick 19th century row houses. Although a majority of Bay Village is residential, there are some institutional and commercial uses. Like its neighbor, Chinatown, Bay Village has very little open space. Residents in Bay Village are concerned about issues relating to traffic, transportation, light, the scale of new development, preserving the residential character of the neighborhood, and would like to reduce the negative air quality/ noise impacts of the Turnpike.

The **South End** is south of downtown, west of Chinatown, east of the Back Bay and north of Roxbury and is the nation's largest Victorian row-house neighborhood. Originally marshland, the area was filled in the 1850s and built up as single family row houses. With the construction of the grander houses in Back Bay, the South End quickly became housing stock for working class immigrants and with them, came a vibrant mix of ethnic restaurants, hotels, theaters, and jazz clubs. Urban Renewal efforts in the 1960s saw the removal of many blocks of rowhouses and the creation of affordable housing. Not long after, in an effort to ensure the preservation of the neighborhood's character, local residents nominated the area to the National Register and a local historic district was established. Rising property values in the 1990s changed the character of the South End again, with many of the remaining rooming houses and bars redeveloped into expensive condominiums and restaurants. Today, many neighborhoods in the South End rival the Back Bay and Beacon Hill in housing costs.

The South End population, however, remains diverse, both ethnically and economically. As new housing is built and existing housing becomes renovated, young professionals and families have been moving into the South End. Issues of rising property taxes and rents as well as other issues of gentrification are a concern among long time residents. Neighborhood residents are also interested in preserving the existing residential character, protecting open spaces, supporting local businesses, avoiding negative traffic impacts, improving pedestrian crossings along the Corridor, resolving parking shortages, and improving public transit. Air rights development would connect the South End with Bay Village and Chinatown.

Urban Design

The character of city blocks, buildings, public open spaces, and streets has a profound effect on livability of each of these neighborhoods. Boston's striking economic resurgence has affected the urban design character and quality of every corner of the City. The impact of these changes on traditional urban neighborhoods is no where as obvious as along the Turnpike corridor. Boston's struggle to accommodate entire new service and research economies created a dramatic skyline next to historic neighborhoods: a generation of taller research buildings near BU and the Longwood Medical Area, affordable housing complexes in Chinatown and the South End, and office and hotel towers next to the South End, Bay Village, and Back Bay. At the same time, subtler but perhaps more pervasive changes have restored these neighborhoods: empty storefronts have disappeared, dilapidated housing has been restored, and cafés and markets have returned to main streets.

The past four decades of dramatic change have set the stage for much of the debate regarding air rights development. Residents argue that nearby tall buildings overshadow and overwhelm 19th century row house neighborhoods and that additional large scale development will threaten both the character and livability of these fragile environments. Proponents argue that tall buildings already dot the skyline next to these neighborhoods and covering the Turnpike—which will require large projects—will enhance these neighborhoods. At the heart of this debate are three core concerns that are critical to the urban design character and quality of neighborhoods along the Turnpike:

- **Scale and Massing**. While Audubon Circle, the Fenway, Back Bay, the South End, and Bay Village each maintain a relatively distinct character and scale, all of these neighborhoods were shaped around 19th century concepts of neighborhood planning. Although its buildings are more diverse, Chinatown maintains an equally distinct and cohesive character—found particularly in the human scale and liveliness of the uses that line its streets. The narrow streets and dense building fabric of several of these neighborhoods make them particularly sensitive to shadow impacts. The railroad corridor that houses the Turnpike has never been a welcome neighbor, however, the potentially large scale of air rights development requires that buildings be carefully scaled—both in terms of height and massing along the street—to ensure appropriate transitions to existing neighborhoods.
- **Connections.** The corridor itself has never been a cohesive part of Boston's urban form, separating the neighborhoods and commercial districts that grew up along each side. air rights development offers a unique opportunity to connect these neighborhoods, which will require that the scale, architecture—and particularly the use and design of street levels—associated with air rights development express continuity with the existing fabric to either side of the Turnpike.
- **Walkable Streets.** Boston is known across the country for its walkable streets, lined with buildings and public spaces that engage pedestrians. The previous generation of air rights development—the Prudential complex and Copley Place—violated this legacy with blank

walls, façades along streets that lacked human scale, and open spaces that were removed from the street or lifeless. This new generation of air rights buildings and public spaces must create scale, massing, architecture, and street level uses that enliven streets for pedestrians.

4. Public Realm and Open Space

Over the course of the last year, the SDSC has learned some very fundamental things about the relationship of the Turnpike to the public realm of the city. These insights have shaped the *vision* and Guidelines and should inform all future proposals for air rights development.

Users of the Public Realm

A variety of people use the public realm that is created by the Corridor: students, faculty, Red Sox fans, commuters, residents walking to work, to buy groceries, walking their dogs, or visiting friends. Ideally the public realm should serve all of these users and minimize conflicts between them.

Districts

The Turnpike is not a cohesive part of Boston's urban form and should not be thought of in these terms. Boston is a city of distinct districts; this is one of its greatest glories. The Turnpike slices through these districts in a seemingly arbitrary fashion, eroding the diversity of place for which Boston is famous.

Open Space Corridors

Boston has several parkland corridors that help to knit our city of neighborhoods together. They include the Charles River, the Emerald Necklace, Commonwealth Avenue, and the Southwest Corridor Park. (See regional open space diagram.) Most of these open space corridors interconnect and have a distinct beginning and end.

The Turnpike corridor would not serve the city well as a continuous open space corridor for a number of reasons. A continuous open space corridor on this site would be isolated and fail to connect important places in the city. The creation of a continuous open space in the western portion would be redundant with the Charles River Reservation and the Emerald Necklace greenway and would act as a barrier between these two great open spaces. Finally, the eastern portion of the corridor has no distinct beginning or terminus to ground an open space corridor.

Views of Boston

The Turnpike corridor provides drivers arriving from the west key views of the Boston skyline. These signature views shape a visitor's first impression of the city and reinforce our sense of place. Air rights development should take skyline views of the city into consideration. Preserving the skyline view may require that certain parcels remain undeveloped. (See views diagram.)

Connections – Streets and Bridges

The two hundred foot-wide gap created by the Turnpike between Chinatown, Bay Village, the Back Bay and the South End is lined by frontage streets and bridged at block intervals by eight streets. (See connections diagram.) This existing grid street system defines eight air rights parcels,

all but one of which (Parcel 19) can be considered within the range of Boston's city block size. Public realm improvements to these vital links and frontage roads would have a profound impact on the quality of life in abutting neighborhoods.

The eight crossings of the Turnpike corridor west of the Back Bay are spread out over more than twice the distance of the eastern portion of the Turnpike air rights Corridor. The Turnpike creates barriers of over a thousand feet in three instances. Half of the connections are long diagonal bridges or elevated structures that challenge pedestrians. In some places, the Turnpike is close to grade, forcing bridges high into the air to clear it, adding to the difficulty of walking alongside it. As a result of historic street layouts, neighborhoods to the south of the Turnpike – the Fenway and Audubon Circle - feel cut off from Commonwealth Avenue and from the Charles River Basin.

Air rights development can build safe, comfortable, and attractive streets and walkways between now isolated neighborhoods.

5. Transportation

Transportation was a central issue for every neighborhood along the corridor during this planning process. The SDSC organized a special Transportation Working Group (TWG) to advise the SDSC on transportation issues. Two members of the SDSC led the TWG, Peter Basset (TWG Chair) and Martha Walz (Chair of a study committee that focused in detail on corridor-wide issues) [explain TWG further]. The TWG met monthly and drew wide attendance from neighborhoods along the corridor and groups with a citywide interest in transportation issues.

After seven years of steady economic expansion, traffic levels on many of the local streets in the corridor increased by xx% to xx% between 1990 and 1999. In fact, as illustrated in Figure xx [1999 levels of service], limited capacity does exist (using standard definitions for urban streets) at most, but not all, intersections that would be affected by air rights development. There are significant differences along the length of the corridor. Traffic congestion on local streets is noticeably more severe east of Charlesgate, particularly in the Back Bay and parts of the South End, Bay Village and Chinatown. However, neighborhoods raised transportation issues relating to every parcel, and therefore, the transportation context must be evaluated in each area.

The ability to develop air rights parcels may very well lie in the high reliance on public transportation that is a defining characteristic of the neighborhoods along the Turnpike. In fact, these neighborhoods already maintain some of the region's highest rates of public transportation use. For example for most neighborhoods along the corridor, 40%-65% of trips to work are by public transit compared to less than 40% by automobile, a complete reversal of the pattern in other parts of the City less well served by public transportation.

The Turnpike corridor already has the potential for excellent regional **public transportation** access. However, the value of this access is limited by a number of factors including local traffic congestion, limited carrying capacity of the Green Line, the lack of a convenient commuter rail station, and incomplete connections to the regional highway system. A series of improvements are now in construction or under study that could significantly increase public transportation access to key points along the corridor.

The Corridor is notable for the absence of designated facilities for **bicycles**. Although bicycle travel is permitted along most city streets, no real accommodations exist to promote bicycle

travel. Connections to the Charles River Basin, the Fens, and Southwest Corridor park are tenuous, and both recreational and commuter cyclists must navigate roadways which are designed with auto travel in mind. Public bicycle racks are located throughout the corridor, although many of these suffer from lack of use because of security concerns.

Pedestrian connections suffer a similar fate as that for bicycles in the sense of limited opportunities for crossing the Turnpike, connections to recreational areas such as the Fens, Charles River Park and Southwest Corridor Park, and discontinuous connections because of the Turnpike itself. Although sidewalks exist along most of the city streets, in many cases these are not adequate by today's design standards, as well as in terms of pedestrian capacity and level of service. High concentrations of pedestrian activity are evident all along the Corridor.

Parking is a polarizing issue for many residents along the corridor. In virtually every neighborhood, many residents report a lack of sufficient resident parking and that commercial and institutional users encroach on the residential supply. Commercial spaces are generally cost-prohibitive for residents. For most neighborhoods east of Charlesgate, the demand for on-street resident spaces (as measured in some neighborhoods by on-street parking permits) exceeds the supply, some cases by substantial margins. At the same time, many residents argue strongly against permitting extensive parking in conjunction with air rights development because this parking will increase local traffic.

III. Analysis: Forces that Shape the *civic vision* and Guidelines

A. Public Realm

The SDSC discovered a wide variety of conditions and numerous opportunities for improvements to the quality and character of the public realm and urban design.

Parcel 1 – 6 BU bridge to Beacon Street Bridge

Location
From the west, the elevated Turnpike crosses over the Beacon Yards and abuts the edge of the Charles River. Views of the Boston skyline prevail from this elevated perspective. As the Turnpike approached Commonwealth Avenue, it ramps down underneath it and enters the dense fabric of the city. The oblique angle of this approach opens a large gap in this fabric that will be difficult to fill.

Streets and walks
BU's campus is divided in two directions, first by Commonwealth Ave. and second, by the BU Bridge where the Turnpike crosses under Parcel 1. Commonwealth Ave. loses its urban feeling near the BU Bridge where the street walls vanish. Each day, hundreds of students cross this thousand-foot gap on their way to and from class. Air rights development on Parcel 1 would reinforce the urban character of Commonwealth Avenue and support some of the heaviest pedestrian activity in the city.

Mountfort Street, bordering the Audubon Circle and Cottage Farm neighborhoods, provides an edge and buffer of trees to the Turnpike. There are only two pedestrian connections across the Turnpike in this section, one of which (Carlton Street) is dominated by cars. St. Mary's Street leads residents from the Audubon Circle neighborhood to the BU campus, with many pedestrians spilling out onto the street. Air rights development on this bridge should help buffer pedestrians

from the noise and wind of the Turnpike. A third pedestrian crossing halfway between the St. Mary's Bridge and the Beacon Street Bridge would help to take the pressure off of St. Mary's Bridge.

Open Space
Boston University has developed a few courtyards facing onto Commonwealth Avenue that help to create a campus quality for this urban university. Campus development over the Turnpike should reinforce and strengthen this pattern while establishing a strong edge to Commonwealth Avenue. The removal of the empty gas station across Mountfort Street from Parcel 4 could make room for a small park.

The Charles River Basin can not be reached from the BU Bridge where stairs dead-end at Storrow Drive. The development of a pedestrian and bicycle path down through Parcel 1 and across the abandoned half of the railroad bridge would provide residents and BU students direct access to either side of the river. The Metropolitan District Commission Charles River Basin master plan supports this concept.

Urban Design
An opportunity exists to create a landscaped buffer between the neighborhoods and air rights as they are developed and maintain an appropriate separation between air rights buildings and the adjacent neighborhood. Air rights buildings should be configured perpendicular to the Turnpike and along cross-streets to avoid "walling off" the neighborhoods from the river to the north and to preserve views of the sky.

Commonwealth Avenue in this area could be one of the city's most walkable streets. An opportunity exists to use new buildings facing onto Commonwealth Avenue to provide a sense of campus and a pedestrian-friendly environment in the area. Parcel 1 faces the Charles River and is ideally situated for a "gateway" building.

Parcels 7-10 Beacon Street Bridge to Charlesgate

Streets and Walks
The Turnpike presents a barrier to pedestrian movement from the residential and entertainment districts to the south and Kenmore Square to the north. Beacon Street rises up 25'+/- to clear the Turnpike at an extremely oblique angle. This is the longest exposed pedestrian crossing of the Turnpike in the air rights corridor. Brookline Street also rises to clear the Turnpike but has a shorter distance to cover. The narrow sidewalks are inadequate to handle the crowds heading from the Kenmore Square MBTA stop to Red Sox games. However, an outstanding view of the Boston skyline can be had after one crosses the bridge.

An opportunity exists to reconnect the two halves of upper Newbury Street for pedestrians when the Bowker overpass is rebuilt in the future. This will also provide much needed access to the isolated Charlesgate Park. Sufficient space exists to build decorative screen walls and landscaping along the entire Turnpike edge in this area, increasing the quality of Newbury Street. A similar treatment should be considered for frontage roads along the Turnpike including Ipswich Street where Fenway Studios is located.

An opportunity to create new pedestrian walkways exists along the Green Line MBTA corridor and tunnel leading to Kenmore Square from the Fens. A pedestrian crosswalk from new Yawkey

Station across Beacon Street will provide a critical link to Blandford Street where an improved stairway and ramp is needed.

Open Space
The Charles River and Muddy River open space corridors wrap around three sides of the Kenmore Square/ Fenway Park district. Open space resources in this area are substantial, however they are difficult to get to. Turnpike air rights should be used to provide access to these resources. The introduction of pedestrian and bicycle paths from the Fens, the Charles River, and Newbury Street will go a long way to reconnecting this area.

A single multi-use path would link three major open space corridors – the Charles Basin, the Fens, and the Commonwealth Mall. Walkers, runners, skaters, and bicyclists would be able to traverse the city without leaving the park environment. Support from Turnpike air rights development and the need to reconstruct portions of the Bowker Overpass should provide an opportunity to reclaim this forgotten piece of Boston open space.

Urban Design
Kenmore Square and Fenway Park abut the Turnpike, along with the backside of former warehouse structures housing entertainment and other enterprises. The lights of Fenway Park loom above. Apartment buildings abut Parcel 7 to the west and the Turnpike at Charlesgate.

While Kenmore Square and attractions like Landsdowne Street and Fenway Park could make this area one of Boston's most cohesive pedestrian realms, the area is highly fragmented due in large part to the long stretches of exposed bridges along Beacon Street and Brookline Avenue. Large surface parking lots on Parcel 7 further erode the fabric. There is an opportunity to capture this area's potential by filling the gaps along Beacon and Brookline with new buildings that line the sidewalk edges and engage pedestrians at street level. These new buildings should form a transition from the row house and small apartment building scale of Audubon Circle to the larger, commercial, scale of Kenmore Square.

Parcels 11-15 Charlesgate to Hynes Convention Center

Streets and Walks
The large gaps in the Back Bay grid at the intersection of Massachusetts Avenue and Boylston Street make travelling along these areas very unpleasant. A bus shelter at the four hundred-foot gap along Massachusetts Avenue provides inadequate protection from wind, noise and exhaust fumes.

Boylston Street, with a mix of large and small-scale buildings, is the commercial spine of Back Bay. The gap created by the Prudential Center, Hynes Convention Center and the Turnpike has created a long inactive zone on the south side of the street. As a result, the small commercial stores west of Massachusetts Avenue on the south side are isolated from the Back Bay. Air rights development on these parcels should continue the broader sidewalk widths across the Turnpike. Sidewalks on Massachusetts Avenue around the Tower Records building should be generous in width with bus turnouts.

Newbury Street has a mixed-use pattern of residences over retail uses housed in historic townhouses and 34 foot setbacks from the curb. The street changes to all commercial use in the last block before Massachusetts Ave. The narrower walks and increased commercial activity in this last block makes for a lively atmosphere. The Public Garden terminates the view down

Newbury Street to the east and Fenway Studios focuses the view to the west. However, there is no hint of the bend in the Back Bay grid which takes place at this juncture. Future development on Parcel 12 should address this opportunity.

Open Space
The Fens is the focus of the Fenway neighborhood. Copley Square, the Commonwealth Avenue Mall, the Public Garden, and the Charles River Basin all contribute to the quality of life in the Back Bay. Development of these parcels should establish a comfortable and vital pedestrian environment. As such, none of these parcels would be appropriate for open space. air rights development on Parcel 12 can contribute by establishing generous sidewalks on Boylston Street and on Newbury Street to connect to the Fens and the Charlesgate Park.

Urban Design
At this point, the Turnpike crosses into Boston's historic core. Both the Fenway and Back Bay include substantial historic districts, one of which overlaps parcel 13. The Fenway Studios Building, a National Historic Landmark, takes advantage of the available northern light afforded by the corridor.

Air rights development offers an opportunity to fill the gaps along these streets in ways that maintain the character and quality of the nearby pedestrian realm. Redevelopment of former rail yards and air rights into the Prudential Center complex set the stage for a dramatic contrast to the historic row house scale and character of buildings north of Boylston Street. Air rights development on parcels 14 and 15, south of Boylston Street, could help form a transition between these very different scales. The scale and character development on parcels 12 and 13 should be carefully scaled to respect the historic Back Bay.

Existing air rights Development Dalton Street to Clarendon Street

Openings to natural light and views
At Dalton Street drivers leave the sunlight and pass underneath four existing Back Bay air rights projects: Hynes Convention Center, the Prudential Center, Copley Place, and the John Hancock garage. Entering into this 3000-foot tunnel and coming out on the other side of the Back Bay next to Chinatown can be disorienting for drivers. This experience underscores the importance of preserving a few openings along the Turnpike to provide a sense of connection to and orientation within the city.

Lessons Learned
The quality of the public realm in and around the existing air rights projects point out some of the pit falls of these developments. The pressure to maximize building footprints to avoid height at Copley Place for instance, resulted in the complete loss of sidewalks in some areas. The provision of an empty plaza at the corner of Dartmouth and Stuart Street or a flight of steps at the base of the Hancock Garage demonstrates an awkward resolution of grade changes over structure. Along city sidewalks, buildings should step down with the grade to make multiple entrances and windows at street level possible. This is difficult but not impossible to do. Parking garages (with their broad bays) are well suited to air rights development as the Hancock garage demonstrates. However, the Hancock garage also illustrates how poor the pedestrian environment can be if ways are not found to limit the width of driveways and occupy the street level with active uses.

Finding ways to incorporate parking in future air rights development will be one of the many tough challenges developers will face. Independent parking garages may be one of the solutions.

The above grade planters in front Neiman Marcus demonstrate how trees can be accommodated over grade if extra room on the sidewalk is provided.

Parcels 16-19 Clarendon Street to Tremont Street

Streets and Walks
The streets of the Back Bay – Arlington, Berkeley, Clarendon and Dartmouth – connect directly across the Turnpike to the South End and recreate a portion of the Back Bay grid in the South End. Pedestrian traffic between these districts is particularly heavy on Dartmouth and Clarendon Street where the entrances to the Back Bay/South End Station are located.

Columbus Avenue slices diagonally across the grid of streets. Its width suggests sidewalks more generous than the prevailing twelve-foot wide walks.

Open Space
Neighborhoods in this area are among the densest in Boston and have little open space. The land along the Turnpike ramp directly in front of Cortes Street offers a rare opportunity to capture some open space for the neighborhoods. By building an attractive retaining wall and back filling, this parcel could be made level with Cortes Street. A linear urban park could then be established at relatively small expense compared to parks constructed on decking. An expansion of this park could occur over a portion of Parcel 18. Parcels 10 and 11 have already been recommended as remaining undeveloped. All or part of Parcel 18 should be added as a park to this list for several reasons. This parcel has great width and length and has room for beautifully landscape edges unlike much of the rest of the Turnpike corridor. It also provides wonderful views of the Boston skyline.

The small park at the terminus of Chandler Street is rarely used and not well maintained. This site happens to be the focal point of four streets and would make an excellent site for a civic building to help bridge the gap between neighborhoods.

Urban Design
The Turnpike passes through some of Boston's most historic areas in this district. Like Parcels 11-15, this portion of the Turnpike is at the edge of distinctly different residential and commercial districts. One block to the north of parcels 16 and 17 is Boston's tallest building, the John Hancock Tower, while one block to the south lie the four and five story row houses of the South End Historic District and Bay Village. Parcels 18 and 19 rest between the South End with its long narrow blocks of Victorian row houses and the Bay Village with its short narrow streets and tightly packed townhouses. Bay Village, built to house the workers for the Back Bay construction boom, has one of the most intimate scales of any Boston neighborhood. Air rights development on these parcels should make careful scale transitions between these very different contexts, locating taller buildings to the north of Columbus.

The degree to which the pedestrian realm along these streets can be enhanced is best measured by the transformation that air rights development brought to Dartmouth in the early 1980s. Development of Back Bay Station, Tent City, the Southwest Corridor Park, and Copley Place, including shops and restaurants facing the street, converted a barren bridge into a lively urban street and connection between the South End and Back Bay. The opportunity exists to line Clarendon, Columbus, and Berkeley with streetwalls that match the different existing scales along these streets. Parcel 18's frontage along Berkeley Street and Cortes would be well suited for a community park. The terra firma facing Cortes offers one of the few opportunities for significant

tree planting on air rights parcels and the Berkeley frontage would make the park readily accessible to the adjacent neighborhoods.

Parcels 20-23 Tremont Street to Southeast Expressway

Streets and Walks
The cross streets of Charles Street, Shawmut Avenue, Washington Street, and Harrison Avenue provide critical links between these Chinatown, Bay Village and the South End. Washington Street is one of the main commercial streets of the South End and the route of the future Silver Line. All of the Turnpike crossings should be lined with wide sidewalks.

Herald Street is and will remain a very busy street feeding traffic to the Southeast Expressway. Marginal Street is very different, however, and can be characterized more as a local roadway. With some reduction of its excessive width, Marginal Street could be transformed into an attractive tree-lined residential street. Dividing up the long linear Parcel 20 will allow for additional pedestrian crossings and shorten the distance between these connections.

Open Space
The only open space near Chinatown is the small park between Shawmut Street and Tremont Street. The Josiah Quincy School addresses the lack of open space by locating athletic courts on rooftop terraces. These work during the day for students but have limited usefulness for the rest of the community. The Turnpike air rights parcels offer one of the few sites remaining for green space in or close to Chinatown.

Urban Design
Chinatown is one of the densest urban neighborhoods in the city, with many residents living in residential towers. Portions of the South End near the Turnpike are underdeveloped with surface parking lots or older parking structures facing the Turnpike. These air rights parcels not only offer an opportunity to provide badly needed housing for Chinatown, but also to enhance the setting and encourage redevelopment of the parking lots and structures to the south into housing and other more appropriate uses.

A figure/ground diagram for this area demonstrates the wide variety of building scales and types. Historic townhouses sit right next to modern towers, which in turn are next to office and institutional buildings. The rich variety, texture and history of buildings in this area makes this district one of the most physically diverse along the Turnpike and suggests that air rights development could achieve a variety of scales and configurations. Building height should rise away from the row houses of Bay Village. Across the adjacent neighborhoods, most buildings come to the edge of the street, resulting in a lively urban character. Parcel 23 sits at the edge of Chinatown and serves as a gateway to the neighborhood.

B. Technical Challenges and Economic Feasibility

Consideration of market and economic feasibility is very important in crafting a meaningful *civic vision* and Guidelines. For air rights development to deliver the substantial benefits that the SDSC envisions, the economics must be feasible. While public subsidy should be considered in cases where air rights can achieve a public purpose such as affordable housing, a park or community facilities that cannot be provided elsewhere due to a lack of land, in most cases air rights development must depend on private or other non-public sponsors. These air rights projects must generate sufficient income to cover the comparatively high costs of buildings over

the Turnpike. The SDSC's *vision* and Guidelines do not sacrifice public benefits to achieve economic feasibility. At the same time, the SDSC recognizes that every development project in this dense and historic city raises questions, generates debate, and requires compromises; air rights development has already proven that it is no different.

The SDSC believes inappropriate air rights development—projects that generate too much traffic or require buildings that diminish the character of their surroundings—should not be built. Real estate markets will continue to change over time, increasing or decreasing the value of different uses and the overall strength of the real estate economy. The Guidelines provide a careful balance that should permit development of many air rights parcels given the strong real estate economy of 1999. In some cases, air rights development may not be feasible under conventional private development models, but may be achievable because of special conditions related to an abutter or public purpose that enables the project to move forward.

The strong real estate market that has prevailed as the SDSC has prepared this *vision* and Guidelines represents an appropriate environment in which to plan for air rights. This economy offers an opportunity to achieve projects that are both appropriate in scale and character and are also financially feasible. These Guidelines should not be compromised to accommodate weak real estate conditions. Air rights development should occur during strong economies that will support the best quality projects.

Air rights development will be shaped by the need to respond to a range of technical considerations:

Cost premiums

To compare the economics of air rights and terra firma development, it is essential to determine the impact that the unique cost premiums associated with air rights construction place on overall development costs. In effect, these cost premiums, together with lease payments to the MTA for the use of the air rights, constitute the cost of creating and then acquiring an air rights site.

The SDSC's consultants and a team of MTA consultants each assessed the magnitude of these cost premiums. While the exact premiums associated with any development project must be analyzed in detail to arrive at an accurate figure, both consultant teams agreed to an order of magnitude range that is sufficient for planning purposes. The components of this premium include:

- The cost of building the "deck" over the air rights—in fact this cost may take a variety of forms other than a literal deck—e.g. columns, deep beams spanning over the Turnpike, a deck to support landscaping or roadways, or other methods. The cost applies to the area over the Turnpike (and adjacent railroad) that is covered. While this cost figure is a function of the geometry of parcels and other site-specific issues, the cost consistently increases with the height of buildings to be supported and the distance that the deck must span. In 1999 dollars, these ranges translated into deck costs as low as $175 to $225/sf for buildings of five or fewer floors and spans ranging from 48' to 80' and as high as $400 to more than $600/sf for 35 story buildings and for spans ranging from 48' to 80'. Taller buildings or longer spans may further increase costs.
- Additional cost premiums that collectively add another $75 to $150/sf of deck cost, include:
  - The cost of maintaining Turnpike operations during construction.

- The costs of providing special lighting, ventilation, signage, life safety and other requirements which may be required, depending on the scale and location of the project, to support Turnpike operations.
- The ongoing costs of maintaining a deck, subject to freezing and the impacts of weather and other wear.

Together these costs, which can range from less than $250/sf to more than $700/sf represent the cost of creating air rights sites. In addition, the MTA believes it must seek lease payments for the right to use the air rights and to cover operational costs related to air rights over a highway. These lease payments are negotiated between the MTA and a potential air rights developer. To understand the impact that these cost premiums and MTA lease payments have on overall development costs, it is essential to compare them to the land value of a comparable terra firma site.

Land Values: Location, Density and Use

Land values along the corridor fluctuate greatly according to real estate market conditions. Land values are difficult to estimate for comparative sites. There is no established value for a specific quantity of land. Land is valued by its potential to generate income, less the cost of generating that income, all over time.

Location, density, and land use all play important roles in determining land values. The simplest way of understanding this is to pick a particular location, look at the density allowed, and assess the value of the uses allowed on it. Thus the market value depends on location to determine the value of a square foot of building and zoning to determine the number of square feet of building allowed on a square foot of land. For example, if zoning allows a landowner to build an office building at a Floor Area Ratio ("FAR") of 8.0, or 8 times the area of the lot, and the market has established that a developer will pay $50/sf of building area to purchase land for an office use in that location, the value of an acre of land under this example is:

43,560sf x 8 x $50/sf = $17,424,000

Assuming a 20 story building with mid-range spans could reasonably involve a cost of $350/sf to create a one acre deck and an additional $125/sf to cover additional premiums, the comparable cost to create this one acre air rights site (not including the cost of MTA lease payments) would be:

43,560sf x $450/sf = $19,602,000

The additional cost of MTA lease payments cannot be estimated. However, without factoring in these lease costs, an air rights project would need to be 10-15% larger to support the same economics as a terra firma site. Barring unique circumstances, a private sponsor will not choose to undertake an air rights project unless the project can support economics that are competitive to a terra firma project. As long as terra firma land values are less than the cost of creating and leasing air rights sites, air rights developers will need to compensate by creating larger projects.

It should be noted that historically, office uses commanded higher land values than residential uses. In the boom economy of 1999, residential land values have risen relative to office land values along most of the Corridor, creating opportunities to build residential projects that may or may not be as achievable in the future. Certain uses in special circumstances can support

unusually high values per buildable square foot. For example, a laboratory building may be far more valuable located near other research facilities, and therefore be able to support economics that could not be achieved by more conventional housing or commercial uses in that same location.

For the foreseeable future, land values for housing and most other uses will probably continue to be highest in the areas around Parcels 11-18, which explains why air rights development proposals are being put forth in this area in 1999 and 2000. Land values have risen dramatically all along the Turnpike corridor over the course of the current real estate boom, far faster than the cost premiums associated with air rights. There is no way to predict if land values will continue to rise relative to cost premiums. In this current real estate cycle, it is likely that private market-driven air rights proposals will continue to focus on Parcels 11-18. Future real estate cycles may make appropriate, privately sponsored, air rights development feasible elsewhere along the corridor.

Boston Real Estate Trends

It may take several real estate cycles before the air rights are substantially built-out. The current strong real estate market and the projects it can support provide a good indication of the issues that will shape privately sponsored air rights development elsewhere along the Corridor.

The residential vacancy rate in neighborhoods surrounding the project is under 1%, and there is unprecedented demand for high-end residential properties. A January, 2000, report indicated that housing prices in the Back Bay, the South End, and Bay Village rose more than 90% between 1995 and the end of 1999 (after in many cases falling 25% to 50% during the previous real estate recession in the early 1990s). It is projected that the new Convention Center and other factors will create demand for over 3,000 new hotel rooms in the next 5-10 years. Boston has a strong retail market fueled by significant disposable household income, tourism, and strong street-level retail. In the current environment, even in a climate of inflated construction costs, developers are interested in meeting demand for these uses.

The immediate vicinity of the air rights parcels contains a wide variety of uses including commercial, residential, entertainment, and institutional. From a development perspective, air rights parcels should become increasingly attractive over the long-term as available terra firma sites are developed, leaving air rights parcels as the only available location for larger retail floorplates.

Other Feasibility Issues

Air rights projects also carry unusual risk in absorption rates, sales prices, rents, and other factors that effect an expected income stream. That the project will likely be on a large scale to absorb the cost of air rights development premiums only increases the magnitude of risk for a developer, and the financial impact of development decisions about massing, height, and uses.

Rental and affordable housing, or other uses that support lower land values, may be desirable for a specific parcel. For these uses, greater density may be needed to cover deck cost premiums as well as some premium to the Turnpike Authority to be responsible to bond holders.

Air rights development involves developing on leased land. Homebuyers have expressed wariness about buying on leased land; condominium and other types of uses may face financing hurdles.

How Should the Economics of air rights Proposals be Assessed?

As CACs, the City, and the community review air rights proposals brought forth by the MTA and developers, the economics of each proposal must be carefully understood and evaluated. Critical questions that must be answered include:

- How do the cost premiums associated with the parcel in question compare with potential terra firma sites, given real estate markets in the surrounding area, allowable densities, and uses that are in demand?
- What is the cost to the project of MTA lease payments?
- What are the values, per square foot of built space, for the uses that are proposed—how large does the project need to be to compete with comparable terra firma projects?
- Are there other appropriate uses that might generate higher values per square foot, allowing the project to become smaller?
- What is the impact of other feasibility issues such as unique risk on the project's economics?

Planning and Design Issues Raised by Specific Uses

Each of the likely uses that the SDSC has considered for air rights development bring their own specific configuration issues to each project. The following examples do not represent hard and fast requirements, but illustrate the planning issues that each use presents:

[SEE GRAPHIC FOR PLANNING AND DESIGN ISSUES]

Site Planning

Many "air rights" sites actually include a combination of terra firma and literal "air rights" over the Turnpike and adjacent railroad. Because the costs and other complications of building on terra firma are less than those encountered in building on top of the highway and railroad, developers will almost always locate as much of their proposals as possible on terra firma adjacent to the Turnpike. This inclination is particularly clear-cut for taller buildings, for which the cost premium can be considerably higher. For example, the Boylston Place proposal for Parcels 12-15, which includes a tower and lower buildings, locates the entire tower footprint on the terra firma portion of Parcel 12, the only terra firma available in this location.

Representing the Market

air rights development requires many actors. Developers bring a perspective that must be considered, along with community and other concerns, in shaping successful air rights projects. In effect, developers represent the needs and desires of the larger market, translating those forces into tangible development programs for air rights parcels. Successful air rights development will occur when developers, the community, the MTA, the City, and other stakeholders engage in meaningful dialog that considers all of the opportunities and challenges that must shape these projects.

C. Transportation

The SDSC created a subcommittee Transportation Working Group ("TWG") to focus in detail on transportation issues within the study area. The TWG focused on resolving the complex transportation issues already facing much of the corridor and the need to expand public transportation service to relieve existing congestion as well as serve air rights development.

[SEE TRANSPORTATION GOALS BOX]

The TWG reported its analysis and recommendations to the SDSC, who have incorporated them into this document.

In applying these goals to the issues raised by potential air rights development and other transportation challenges along the corridor, the SDSC and TWG quickly came to realize that the Turnpike corridor faces two related, yet distinct transportation issues:

- Transportation issues directly related to accommodating the new travel demand generated by air rights development, and to improving transportation conditions in the Turnpike corridor—the SDSC and TWG worked together to understand and resolve these issues.
- Transportation issues related to the lack of adequate east/west connections for vehicular and public transportation between the Logan Airport and the South Boston Waterfront to the east and Turnpike corridor to the west. The TWG and the Regional Connections Subcommittee focused on these issues.

East/West Connections

The Central Artery/Tunnel Project's extension of I-90 will put the Back Bay, Logan Airport, and the rapidly emerging South Boston Waterfront on the same regional highway. However, the Turnpike's lack of a westbound off-ramp or an eastbound on-ramp in the Back Bay makes a direct vehicular connection impossible between the Back Bay and the South Boston Waterfront, or between the Back Bay and Logan Airport, via the Turnpike. Existing and currently planned public transit services similarly fail to provide convenient connections between the Back Bay and the South Boston Waterfront or Logan Airport. With the growth and development of the South Boston Waterfront District and the new convention center, the need for this connection will become even more critical. Without this connection, public transit riders must transfer three times to reach the Back Bay from the South Boston Waterfront or Logan Airport: the South Boston Pier Transitway / Silver Line - Red Line - Green Line or Orange Line. The "Full-Build Silver Line," with its tunnel connection to the Silver Line's Washington Street Service, would improve this to a manageable two transfer rides, but this tunnel connection currently has no funding. Improved Green Line capacity and a downtown commuter rail shuttle service also have the potential to improve to improve these east-west connections. However, without adequate public transit and / or highway connections, travel demand between the Back Bay and the South Boston Waterfront or Logan Airport may result in increased traffic on already-congested surface streets.

The TWG formed a Regional Connections Subcommittee to focus on opportunities to enhance east-west connections. The Subcommittee identified a variety of alternatives for improving these connections, both public transit and highway, as well as the issues and impacts that should be analyzed in reviewing alternatives. The Subcommittee prepared a Scope of Work that

summarizes the alternative connections that should be the subject of further study. The SDSC believes that improved connections should be the focus of significant further study by BTD and other transportation agencies.

Air Rights Development

Corridor-wide Issues

To set the stage for analyzing the specific transportation issues related to each parcel, the SDSC began by assessing three corridor-wide factors that play a major role in defining what types of air rights development are appropriate from a transportation perspective:

- **Land use.** Different land uses generate very different traffic impacts during peak hours. For example, the following amount of each land use would generate 100 vehicle trips during peak hour (in each case the range depends on factors such as the exact user, the amount of parking, proximity to transit, and efforts by users to manage traffic by encouraging use of T-passes and similar programs):
  - 200-250,000sf of **housing**
  - 150-175,000sf of **hotel**
  - 75-125,000sf of **office**

  (based on typical mode splits for air rights parcels, based on US Census Data.)
  For most parcels, housing generates the lowest volume of peak vehicular traffic, followed by hotel or other relatively low traffic-generating uses.
- **Use of public transportation.** The SDSC recognizes that a number of the public transportation improvements planned or proposed for the corridor will be critical to accommodating significant air rights development. While the ability of specific parcels to accommodate air rights development without these improvements is limited, the SDSC believes that over the long-term the Turnpike Corridor can not sustain continued growth in housing and employment without increasing the already high usage of public transportation. Increasing system capacity and improving service is key to increasing usage.
- **Parking ratios.** Reducing allowable parking ratios can be an effective tool in encouraging use of public transportation and discouraging use of private automobiles. Figure xx indicates the SDSC's goals for reduced parking ratios (amount of allowed parking per unit of housing, per room in a hotel, or per 1,000sf for most other uses), developed in consultation with BTD. **These parking ratios assume increases in public transportation use of 20-50% (depending on time of day and location) and decreases in automobile usage of 15-25%.** In every case, these ratios represent substantial reductions below current levels approved in different parts of the corridor and would require increased reliance on public transportation. For much of the corridor, the SDSC recommends that CACs carefully review whether uses like retail or cinemas require any additional parking or should be served by a combination of public transportation, walking trips, and use of other available parking (for example, nearby office parking not in use on evenings or weekends). Overall, however, the SDSC believes that, wherever possible, parking should be reduced in the Corridor neighborhoods. As parking is less of an issue in neighborhoods farther from the city's core, the parking ratios in more distant neighborhoods tend to be slightly higher than those in the city's central neighborhoods.

Planned and proposed public transportation projects

The following regional and corridor-related public transportation initiatives could substantially relieve congestion on local streets and create increased capacity for air rights development:

- The Full-Build **Silver Line** (or Washington Street Replacement Service), which passes through Parcels 20-23 in Chinatown, Bay Village and the South End would create direct links

to Roxbury and downtown and, in its final configuration, to the Orange Line, Green Line, Red Line and commuter rail, and to the South Boston Waterfront. In its final configuration, the Silver Line would also connect this part of the corridor via South Station to Logan Airport using the Airport Intermodal Transit Connector (AITC). However, the Full-Build phase of the Silver Line depends on an unfunded tunnel to connect Washington Street to South Boston piers transitway.

- The **Urban Ring**, a circumferential transit line, has the potential to dramatically relieve over crowding in the central subway system—particularly the Green Line—and add important new links that currently are not convenient via public transit. For example, the Urban Ring would provide direct links between communities west of Kenmore Square, and links via the Green Line for the rest of the corridor, to major centers of jobs and cultural amenities such as Kendall Square and the LMA. The MBTA has not yet committed to implementing the Urban Ring, which is in the midst of a Major Investment Study (MIS) that will determine its feasibility, costs, potential route, station locations, vehicles, phasing, and other key qualities. Two alternative alignments are being considered. The first is through Parcel 2 in Brookline. The second is in the area of Parcels 7-10 potentially connecting into the proposed Yawkey commuter rail station.
- For transit service, the **Green Line** presents the greatest opportunity for service due to its proximity to the Turnpike. Particularly west of Copley Square, existing Green Line stations are within easy walking distance of air rights Parcels 1-15 (see Transit Opportunities Graphic). East of Copley Square, the Green Line shifts northerly along Boylston Street. Parcels 16-19 fall just outside a ¼ mile-walking radius of Arlington Street station; re-opening of the Berkeley Street access has the potential to enhance accessibility of these parcels to the Green Line. However, the proximity of the Green Line is only a part of the equation. The green Line has significant capacity constraints. Currently at 91% of its capacity at Copley (peak hour; peak direction), the Green Line is essentially "full", limited by an outdated signal system, inefficiencies introduced by surface street conflicts outside the central (underground) subway, and power supply. Without improvement, the Green Line cannot accommodate substantial increase in demand. Although capacity may be tweaked from the system when looking at individual stations, the bottleneck at Copley is the weak link. A capacity optimization study is currently under way. Provision of three car trains may be essential to add capacity on the Green Line.
- The **Orange Line** provides the next best opportunity for service to air rights parcels, particularly for Parcels 16-23, located east of Copley Square. Back Bay/ South End, Chinatown, and New England Medical Center stations are within easy walking distance of these parcels. The southern section of the Orange Line, which was upgraded during the Southwest Corridor project, is currently operating well below capacity at Back Bay/ South End Station; this is projected to continue through 2010. The northern section of the Orange Line has its critical juncture at North Station where the line is approaching capacity; this segment will benefit from the Orange Line Signal Improvement Program. With anticipated future growth and without improvements, this northern section of the Orange Line will be over capacity by 2010.
- A multi-modal **Yawkey Station**, serving commuter rail and regional buses, could provide direct connections to western suburbs for the area to the west of Kenmore Square. A convenient Green Line connection, particularly at Kenmore Square, would extend this benefit to much of the rest of the corridor. The MBTA is currently studying the feasibility location, level of service, and other aspects of this station; it should be noted that creating a shuttle link to the LMA would greatly enhance ridership and thus the feasibility of this important link.
- **Commuter rail** service already runs parallel to the corridor and an opportunity may exist for regular shuttle service between Yawkey, Back Bay/ South End, and South Stations, which

would in effect provide an additional public transit service to much of the corridor. This shuttle service would require increasing the availability of tracks/berths at South Station and providing storage tracks at Yawkey. Transforming Yawkey Station into a year-round, multi-modal facility expands transit access opportunities for air rights parcels and other users (residential, commercial and institutional). The presence of major regional attractions (BU, LMA, Fenway Park) in the immediate vicinity of Yawkey Station makes this an ideal opportunity.

- The **North-South Rail Link** (connecting heavy rail between North and South Stations) would facilitate travel to the Corridor, via Back Bay/ South End Station, from the north and provide relief to the Orange (north) and Green Lines.
- Public and private **bus service** cross the corridor at many points but are not likely to significantly contribute to enhanced public transportation access. Bus hubs are located at Kenmore, Back Bay/ South End, and South Station. Private carriers have stops interspersed throughout the city, and on-street "staging" of the private buses is a quality of life transportation issue, particularly because of noise and air quality. Public and private buses also contribute to traffic congestion.
- While a number of **roadway** improvements have been proposed or are underway, most notably along Commonwealth Avenue west of Kenmore Square, at Kenmore Square, and along Massachusetts Avenue, these improvements are focused toward enhancing pedestrian movement and streetscape quality, rather than increasing traffic capacity. The notable exception is improvements to the Sears Rotary proposed as part of the Landmark Center project, which are intended to correct existing deficiencies as well as to address impacts generated by the Landmark and other nearby projects.

Analysis by District

Parcels 1 and 4-6

The Audubon Circle, Fenway and Kenmore neighborhoods in this district host three major regional uses: BU, Fenway Park, and the LMA. These uses draw one of the region's most diverse populations, including residents; university faculty and staff; LMA employees, researchers, clients; Red Sox fans; and other travelling through the area to reach downtown, Cambridge, or western suburbs. Each of the major regional uses is engaged in planning that will affect transportation in this area; these plans have been factored into our analysis.

Predominant **pedestrian** patterns in the district show concentrated pedestrian activity on Commonwealth Avenue and radial activity to and from the Kenmore Square Green Line station transportation hub. North-south movement across the Turnpike between neighborhoods and jobs/institution/commercial/entertainment/recreationuses is confined to three Turnpike bridge crossings (Essex, Carlton and St. Mary's), clustered on the western parcels. The presence of BU and Fenway Park results in highly intense pedestrian activity, particularly near to Kenmore Square. At the intersection of the BU Bridge and commonwealth Avenue, pedestrian traffic and vehicular traffic volumes are very high, resulting in conflicts.

Commonwealth Avenue is the primary pedestrian corridor for east-west travel. The presence of BU on either side and the Green Line in the median results in high crossing activity. Major crossings coincide with transit stops and BU activities on Commonwealth Avenue. Beacon Street and Brookline Avenue funnel pedestrians between LMA and Kenmore Square area. On game days, these roadways become defacto pedestrian malls. Pedestrian volumes are highest (over 2000 pedestrians per day) along Commonwealth Avenue at Kenmore Square, Cummington Street, and St. Mary's Street intersections. By comparison, other Commonwealth intersections

have 800-1000 pedestrian crossings per day, which is still very heavy. Moderate pedestrian volumes are present at Audubon Circle (250-300 pedestrians). Likely air rights development could generate roughly 2,300 peak hour pedestrian trips per day (walk and transit combined).

air rights development should accommodate and help fund redesign of Commonwealth Avenue, which will provide enhanced pedestrian amenities (wider sidewalks, shorter crossings, and enhanced pedestrian refuge areas).

Public transit. Currently 65-80% of trips in this area are by foot or by transit, and future air rights planning should reinforce this high ratio by providing well-designed pedestrian connections between new development and transit stations. While the Green Line serves these parcels the via the Commonwealth Avenue surface street stops, within a short walk of each of these air rights parcels, the value of the Green Line is only marginal due to its current capacity constraints east of Kenmore Square. In addition to addressing those capacity constraints, setting traffic signal timings that favor Green Line vehicles would increase transit capacity and convenience in this area.

A new Yawkey Station commuter rail, which could be accommodated on Parcels 5 & 6, would provide substantial benefits—providing convenient direct access to the western suburbs. Providing commuter rail shuttle service between Yawkey, Back Bay/ South End, and South Stations would provides an alternate to the Green Line for local travel. The Urban Ring would also provide significant benefits to this area, relieving pressure on the Green Line and providing new cross-town access to important regional centers of education and research, including the LMA, Harvard, and MIT. Ample capacity exists on most bus service routes and MASCO shuttles augment public bus service. Linking the MASCO shuttle system with a new Yawkey Station could also provide direct access between a new BU research campus and the LMA.

Bicycle. Bicycle accommodations are truly a "share the road" experience; cyclists compete with autos, buses and transit trolleys for space. Crossings of the Turnpike and connections to open space are limited. The institutional context and presence of recreational open attracts increased bicycle use. Bicycle connections between neighborhoods and the Charles River, adjacent to and through the BU campus should be expanded.

Parking. A recent parking survey conducted by the Central Transportation Planning Staff , the regions major transportation statistical survey center, shows 2,600 on-street parking spaces and 4,500 off-street spaces located in the district. Approximately 25% of these spaces are designated for residential use, either by permit or through ownership. Local community members have expressed strong concerns that new air rights related facilities include parking to avoid further loss of spaces available to residents. As such, the SDSC's parking goals for this district allow parking for research-related uses (the likely predominant use) to no more than one space per 1,000 square feet, to encourage increased use of public transit, and parking for a hotel (the most likely commercial use in the immediate future) to .75 space per room. Future CAC's should carefully consider the parking that should be permitted for residential and other uses.

Traffic operations. Traffic operations in this district are influenced by intense commuter activity, sustained throughout the day by the institutional traffic activity of the LMA and BU Congestion in this area is severe, with many intersections at or near capacity: BU Bridge/Commonwealth Avenue/Carlton Street/University Road, Audubon Circle, and Kenmore Square. Multi-functional Commonwealth Avenue struggles to meet demands placed on it by all

modes. The City and other stakeholders are planning a variety of infrastructure improvements in this area.

Accommodating air rights development. The SDSC asked its consultants to review the traffic and other transportation impacts of air rights development that met the spirit and letter of the Guidelines. The consultant team analyzed scenarios mostly devoted to a mix of research and development with retail space facing Beacon Street for parcels 4-6 and a cultural use together with housing located on Parcel 1. The consultant team assumed a worst-case future scenario in which none of the desirable public transportation or other improvements for this area had been implemented.

The consultants reported that while the total size may be considerable, the expected research and related uses would be closely associated with BU's existing operations and carry relatively low trip generating potential. Roughly 90% of these trips are already present in the district. These trips are primarily redistributed, extended or inter-campus trips, resulting in little impact to overall traffic and transit operations. While the full range of transportation impacts of any air rights development must be carefully analyzed during a CAC review, the SDSC believes from a transportation perspective that it is appropriate to bring forth air rights proposals that meet the spirit and letter of the Guidelines. In contrast, scenarios with a similar total square footage but consisting of a mix of office and housing located on parcels 4-6 produced significant traffic impacts that affected the level of service at nearby intersections.

Additional development would boost ridership, and therefore feasibility, for an Urban Ring and/or Yawkey commuter rail station located in this district. This development would also, although to a minor extent, increase the need to improve Green Line capacity east of Kenmore Square.

Parcels 7-10

Like the previous district, this area presents a uniquely diverse population of residents, employees, and visitors. Neighborhoods—Audubon Circle and the Fenway; the Kenmore Square and Lansdowne Street mixed-use and entertainment districts; and regional uses like the Red Sox, LMA, and BU all make different demands on the local transportation system.

Pedestrian activity is intense and fueled by the presence of regional uses. Kenmore Square station is situated within a short walk of Parcels 7 and 8 and travel between the station, the neighborhoods, Fenway Park and nightclubs along Lansdowne Street is reflected in the radial street pattern. On game days, Brookline Avenue, Lansdowne Street, Yawkey Way and Ipswich Street are inundated with pedestrians.

Public transit. Green Line service suffers the same problems in this district: the location is excellent, but capacity limitations exist. To some extent, there is a brighter picture for these parcels that are located to the west of Copley Station. Because peak load is inbound at Copley, some capacity may be available as inbound riders exit the trains prior to the critical point, and outbound capacity (from Copley) is less critical. However, Green Line surface complications tend to be slow and make transit less attractive. Restructuring signal timings to favor the surface Green Line routes could make this service more competitive. The reliance on the Green Line (approximately 80% of transit riders are expected to use the Green Line for access) continue to make its enhancement the most important component of the transportation element for this civic vision.

Creation of a full service, multi-modal, Yawkey commuter rail station—also under study for this district—would also represent important tangible benefits to this district, and potential air rights development. In addition to direct commuter rail access to the western suburbs, this station—together with storage tracks—could accommodate commuter rail shuttle service to Back Bay/ South End and South Stations. The Urban Ring would also bring significant benefits to this district comparable to those for the previous district, including taking some pressure off of the Green Line. Expanded MASCO shuttle service to the LMA would not only augment local bus service. Collecting MASCO parking facilities into a stacked parking facility—now scattered on surface lots—onto Parcel 7, for example, may support creation of more frequent and convenient shuttle service that would be available to the public.

Bicycle accommodations are again truly a "share the road" experience, as cyclists compete with autos, buses and transit trolleys for space. Crossings of the Turnpike and connections to open space are limited. air rights development should take advantage of opportunities to expand and enhance bicycle connections between neighborhoods and the Charles River, adjacent to and through the BU campus.

Parking. Of 3,000 public on-street spaces 60% are designated as residential permit. The 3,200 public off-street spaces have only 2% residential use. Proposals by the Red Sox and other regional uses indicate a small increase in proposed parking in this district. However, the use of residential parking spaces by Red Sox patrons is also a significant public concern. While it is necessary to improve public transportation to this area, the right balance must be found for air rights development to ensure that its users do not compete with residents for parking spaces. The SDSC's parking goals for potential uses in this district are, as everywhere, intended to encourage increased use of public transit, and in accord with the Fenway IPOD Working Group's efforts, reflect the particularly difficult traffic congestion issues facing the Fenway:

- Housing—maximum of .75 space per unit (depending on unit type and likely occupants)
- Office and R&D—maximum of.75 space per 1,000sf
- Hotel–.5 space per room

Traffic Operations. The current degree of traffic congestion that exists today in this district is a function of the regional attractions which are present, and the geographic positioning with respect to the regional roadway network to which connections are provided via Charlesgate and Commonwealth Avenue. For six months of the year, Red Sox games produce frequent "peak events." Even with a 7:00 p.m. start, fans arrive early, overlapping with the commuter peak. City-sponsored improvements will provide better organization and guidance through Kenmore Square and along Commonwealth Avenue, but will not significantly increase roadway capacity.

Accommodating air rights development.
The SDSC asked its consultants to review the traffic and other transportation impacts of air rights development that met the spirit and letter of the Guidelines. These scenarios included housing (with street level retail facing Beacon Street) together with mixed-use development over the Turnpike on Parcels 7 and 8. In addition, the SDSC asked the consultants to incorporate the added impact of a parking structure proposed by the Red Sox for parcel 7. To encourage reuse of surface parking lots for housing and other more appropriate uses, the SDSC also asked the consultant team to assume that LMA-related parking, currently located on nearby surface lots was consolidated into the parking structure proposed by the Red Sox in assessing traffic impacts. The SDSC asked its consultants to assess the impacts of this air rights development by assuming a worst-case future in which none of the desirable public transportation or other improvements for

this area had been implemented. The consultants analyzed a mix of housing, hotel, entertainment, and research and development uses together with the parking structure proposed by the Red Sox.

The consultants reported that for the mix of uses studied, air rights development should result in little net impact to overall traffic and transit operations. While the full range of transportation impacts of any air rights development must be carefully analyzed during a CAC review, the SDSC believes from a transportation perspective that it is appropriate to bring forth air rights proposals that meet the spirit and letter of the Guidelines. In contrast, scenarios with a similar total square footage but consisting of largely office space produced significant traffic impacts that affected the level of service at nearby intersections.

Additional development would boost ridership, and therefore feasibility, for an Urban Ring and/or Yawkey commuter rail station located in this district. This development would add some pressure to the need to improve Green Line capacity east of Kenmore Square. Consolidation of MASCO parking within a proposed Red Sox parking facility would support increased shuttles linking parcel 7 to the LMA. These shuttles could also support further increased LMA ridership at a new Yawkey station and possibly an Urban Ring station if one is located in this area, which would enhance feasibility. These shuttles would also provide a direct connection between the LMA and potential commuter rail shuttle service running between Yawkey Station and South Station.

Parcels 11-15

At a crossroads between Back Bay and the Fenway, these parcels are located along important streets that provide well-used connections between a number of neighborhoods, downtown, and Cambridge. Massachusetts Avenue, a congested arterial running essentially north-south, connects a series of Boston neighborhoods to Back Bay and Cambridge. The east-west cross streets, Boylston and Newbury, represent the major commercial streets of Back Bay and provide connections to Downtown and neighborhood so the east. A westbound Turnpike on-ramp is located opposite Newbury Street at Massachusetts Avenue.

Pedestrian. Concentrated pedestrian activity exists on Massachusetts Avenue between and at intersections with Boylston and Newbury Streets. The presence of the Hynes Convention Center Green Line station, designated MBTA bus stops along Massachusetts Avenue, and attractions such as the Hynes Convention Center, Newbury Street commercial area and Berklee College of Music result in high sidewalk and crossing volumes. Traffic congestion, often resulting in gridlock, blocks pedestrians and frequent jaywalking is evident. Sidewalks are relatively narrow (8-10 feet wide) along Massachusetts Avenue, and pedestrians occasionally spill onto the street to make headway, particularly near the station entrances at peak periods. air rights development in this area should include wider sidewalks.

Public transit. The Hynes Convention Center Green Line station is located at the center of this parcel grouping, on the east side of Massachusetts Avenue. Connections to all other rapid transit lines can be made downtown. Indirect commuter rail service is available from Back Bay/ South End Station to the east, but requires a 2,600 foot walk or transfer to another mode (bus, transit, taxi) to reach the district. Yawkey Station is located 2,600 feet to the west and a new full service station, if located near Kenmore Square, could provide some service to these parcels. MBTA Bus Routes 1, 10 and 39 serve the area as well, and bus stops are located on the east and west sides of Massachusetts Avenue.

The proximity of the Green Line, as at other locations throughout the corridor, has diminished value because of the already constrained capacity. Currently at 91% of capacity in the peak direction (inbound at Copley), the line is subject to further interference and schedule disruptions on the surface lines to the west. Narrow sidewalks bracketing the station access points also contribute to the general confusion in this area. While solving the Green Line's capacity limitations and adding cars to the Green Line would address capacity for transit, simply adding buses will not resolve capacity issues because buses already run at short headways during peak hours and roadway congestion would further limit additional service during peak periods.

Bicycle. The presence of adjacent university/institutional use presents a higher potential for bicycle travel, and some accommodations for bicycle parking are made in the area. Well-used bicycle racks are located near Berklee but in other locations bicycles are chained to any convenient pole or structure, which can encroach on the already limited walking space. Connections for bicycle travel to and through the district are limited as is the case throughout the corridor.

Parking. Public on-street parking spaces number 1,200 in this district, with 50% designated for residential permit parking. Only 2% of the 4,100 public off-street spaces are designated for residential use. The off-street spaces are predominantly in structured Prudential Center garages. On- and off-street parking is fully utilized throughout the day, according to the CTPS survey. The SDSC's parking goals for potential uses in this district are, as everywhere, intended to encourage increased use of public transit:

- Housing—.60 to 1 space per unit (depending on unit type and likely occupants)
- Office and R&D— maximum of .75 space per 1,000sf
- Hotel—.5 space per room
- Retail, cinema—to be determined by a CAC

Traffic operations. To be written

Accommodating air rights development.
The SDSC asked its consultants to review the traffic and other transportation impacts of air rights development that met the spirit and letter of the Guidelines. The SDSC asked its consultants to review two basic scenarios for these parcels:

- A proposal already put forth by the MTA and Millenium Partners Boston, termed "Boylston Square," to develop roughly one million square feet of housing, hotel, cinemas, retails, and a health club.
- A reduced program that included a mixed-use development consisting of primarily of housing, together with a hotel and street level retail.

Due to the congested nature of Massachusetts Avenue, and limited capacity at a number of nearby intersections, the consultant team reported that both programs would present significant transportation challenges and that these challenges should be resolved through the CAC process (already in place for these parcels).

Additional development would add pressure to the need to improve Green Line capacity. This development should also provide enhanced waiting and lobby facilities for bus and Green Line patrons.

Parcels 16-19
Intro text to be written

Pedestrians. The accessibility of transit service and the presence of residential uses south of the Turnpike and the high density commercial uses located north of the Turnpike result in a combined transit and walk mode share of over 60%. The patterns follow the north-south roadways, perpendicular to the Turnpike, and along Columbus Avenue towards downtown. The highest activity occurs along Clarendon St., adjacent to Back Bay/South End Station. The Stuart Street and Columbus Avenue intersections are also focal points for pedestrian activity between these two intersections. On Clarendon St., the presence of the parking garage access and Turnpike westbound on ramp introduces additional conflicts. Police officers provide additional control for pedestrian crossings on Stuart and Clarendon Streets during the PM peak hours.

Public transit. Well-served by the Orange Line, commuter rail, and buses at Back Bay/South End Station, these parcels rely much less on an already overtaxed Green Line. Parcel 16 fronts on Clarendon St., directly opposite Back Bay/South End Station and bus loop. Green Line service is still within reach from the Copley and Arlington stations, but the inbound movement at Copley is essentially at capacity. Traveling outbound (from Park Street toward Parcel 19) and exiting at Arlington St., all branches of the Green Line are available. The Silver Line will be within a reasonable walking distance, particularly of Parcel 18, or with transfers to the Orange Line at New England Medical Center station. Return of the Berkeley Street entrance to Arlington Street station would further serve to enhance accessibility of the T to these parcels.

Bicycle. Bicycle racks are located at the rear of Back Bay/South End Station. These racks are infrequently used and viewed as insecure. Bicyclists bring their bicycles inside the station lobby and secure them there.

Parking. Existing parking supply in this district includes 2,600 public on-street spaces and 2,600 public off-street spaces. The Hancock parking garage is located directly across the street from Parcel 16. The CTPS parking survey shows full utilization of all spaces throughout the day. The SDSC's parking goals for potential uses in this district are, as everywhere, intended to encourage increased use of public transit:

- Housing—maximum of .75 space per unit (depending on unit type and likely occupants)
- Office and R&D—maximum of .75 space per 1,000sf
- Hotel—.5 space per room
- Retail, cinema—to be determined by a CAC

Traffic operations. Arlington and Berkeley Streets have historically functioned as a north-south couplet connecting Storrow Drive and the Southeast Expressway, often used to bypass congestion at Leverett Circle and the Central Artery. This activity has increased with the ongoing construction of the CA/T. Through-traffic intrusion has been of concern to residents who live along these corridors. This concern extends to Clarendon St., which is also experiencing the effects of traffic diverted from the congested regional roadways. The presence of on-ramps to the Central Artery to the south at Waltham Street (via Clarendon St.) is attributed to the increase in traffic volumes through this area of the South End. Traffic operations at most local intersections in Year 2010 will be under capacity, after the CA/T is complete. Notable exceptions include the Arlington /Stuart /Columbus St. intersections and the "knuckle" formed by Arlington/Marginal/Herald Streets.

Accommodating air rights development.
The SDSC asked its consultants to review the traffic and other transportation impacts of air rights development that met the spirit and letter of the Guidelines. These scenarios included mixed-use buildings on Parcels 16 and 17, primarily housing together with a hotel and street level retail. As

the SDSC did across the corridor, the Committee asked its consultants to assess the impacts of this development by assuming a worst-case future in which none of the desirable public transportation or other improvements for this area had been implemented. The consultant team reported that this air rights development should result in little net impact to overall traffic and transit operations. While the full range of transportation impacts of any air rights development must be carefully analyzed during a CAC review, the SDSC believes from a transportation perspective that it is appropriate to bring forth air rights proposals that meet the spirit and letter of the Guidelines. In contrast, scenarios with a similar total square footage but consisting of largely office space produced significant traffic impacts that affected the level of service at nearby intersections.

The SDSC also asked its consultants to assess the impacts of air rights development on Parcel 18, although due to market considerations, development on this Parcel is much less likely in the foreseeable future. The consultants reported that congestion at the Arlington/Marginal/Herald Streets intersection limits the development potential of this Parcel without reconfiguring this intersection to increase its capacity. A future CAC should carefully consider the level of development that could be accommodated on Parcel 18; in any event, housing or similar low-traffic generation uses should be the primary use.

The direct proximity to Back Bay/South End Station is critical to the anticipated high transit usage associated with this air rights development. Additional development would boost ridership for commuter rail shuttles between Yawkey and South Stations. This development would add some pressure to the need to improve Green Line capacity.

Parcels 20-23

These parcels are located along a series of cross streets that serve a diverse mix of neighborhood and through-traffic. Shawmut Avenue Washington Street, and Harrison Avenue. serve Chinatown, connecting it to adjacent neighborhoods, and providing access to downtown from the South End and other communities to the south. The parcels also line Herald Street, which carries a substantial portion of the regional traffic and connections to the Southeast Expressway, Central Artery, and Turnpike (westbound). The Chinatown, Bay Village, and South End neighborhoods experience the effects of commuter traffic on roadways that connect to Herald Street, as well as further intrusion as drivers seek alternate routes due to construction related congestion.

Pedestrian. The predominant pedestrian pattern is north-south across the Turnpike between the Chinatown and South End residential areas and schools, cultural centers, institutions and commercial activities. Currently, there is less activity parallel to the Turnpike, particularly along Herald Street. Pedestrian accommodations are very limited, with narrow sidewalks and pedestrian space at intersections and outdated signal equipment gives priority to vehicular traffic unduly delaying pedestrians. Pedestrian level street lighting is limited, creating an unfriendly environment.

Public transit. The Orange Line provides primary service to the district, with conveniently located stations at New England Medical Center and Chinatown. Connections to other lines are made through transfers at Downtown Crossing or Park Street. The soon to be implemented first phase of the Silver Line will restore transit service to Washington Street, with stops planned adjacent to the air rights parcels. Capacity is available on each of these lines to accommodate future growth. Completion of the Silver Line Transitway and related South Boston Piers Transitway (to the South Boston Waterfront and Logan Airport), the Urban Ring and potentially

the North-South Rail Link will offer relief on other congested transit lines and further incentives to use public transit.

Bicycle. No special accommodations exist for travel through the area on bicycle. As is found elsewhere throughout the corridor and the city in general, bicycle riders must compete with vehicular traffic and parked vehicles on city streets. It would be highly desirable to create a direct connection from the Southwest Corridor bicycle path to downtown. Opportunities include connecting to the Harbor Trail.

Parking. Parking supply in the Chinatown, Bay Village, and South End neighborhoods is comprised of a mix of on and off-street parking. Almost 7,500 parking spaces exist today; 3,300 on-street and 4,200 off-street. Twenty-three percent of the total spaces are designated for residential use. Residents have reported the need for additional residential parking, including opportunities for shared parking (e.g. nighttime use by residents of commercial spaces).

Traffic operations. Post construction of the Central Artery, traffic operations adjacent to these parcels are expected to function better than they do in 1999. Through-traffic on Marginal Street should be discouraged, enhancing this street as a residential environment. [Herald Street discussion to be written.]

Accommodating air rights development.
The SDSC asked its consultants to review the traffic and other transportation impacts of air rights development that met the spirit and letter of the Guidelines. These scenarios consisted primarily of housing together with street level retail on Parcels 20-22. As the SDSC did across the corridor, the Committee asked its consultants to assess the impacts of this development by assuming a worst-case future in which none of the desirable public transportation or other improvements for this area had been implemented. The consultant team reported that this air rights development should result in little net impact to overall traffic and transit operations. While the full range of transportation impacts of any air rights development must be carefully analyzed during a CAC review, the SDSC believes from a transportation perspective that it is appropriate to bring forth air rights proposals that meet the spirit and letter of the Guidelines. In contrast, scenarios with a similar total square footage but consisting of largely office space produced significant traffic impacts that affected the level of service at nearby intersections.

The consultant's findings were based in part on the relatively very low automobile usage of current residents in this area and did reflect the advent of the Silver Line, which will soon begin construction. This development would boost ridership on the Silver Line. The consultant team did not assess the impacts of a significant development on Parcel 23, which is not likely to be financially feasible in the foreseeable future.

WORKING DRAFT

TEXT BOXES

Core Principles (page 8)

The use of Air Rights should:

1. Reinforce the vitality and quality of life in adjacent communities by balancing the larger scale inherent in these projects with uses and massing that are compatible with adjacent neighborhoods and respecting the very different planning context presented by each of the communities along the Turnpike.
2. Enhancing the city as a place to live, work, and invest by taking advantage of exceptional opportunities to accommodate projects that generate broad civic benefits, not readily achievable without using air rights.
3. Repair and enrich the city's public realm by capturing unique opportunities to create a wide range of vital public spaces and designing buildings and public spaces to contribute to Boston's distinctive character and sense of itself as a community.
4. Foster increased use of public transportation and decreased reliance on private automobiles by taking tangible steps to expand public transportation, enhance the pedestrian realm, and limit parking.

Common Parcel Summary Graphic (page 8)

- **Filling the gaps between neighborhoods and along major public streets** by lining these streets with shops (emphasizing local businesses, not national franchises), cafés, exhibit spaces, and other uses that engage pedestrians; creating a variety of parks and public spaces; and paying special attention to the ways in which buildings and public spaces can enrich the public realm.
- **Promoting use of public transportation** by reducing parking provisions below levels prevailing at the time of this report and improving public transportation.
- Creating **architecture** that combines respect for Boston's unique historic character and expression of the vitality and character of our era.

WORKING DRAFT

Community Summary Graphic (page 8)

Allston-Brighton, Audubon Circle, Boston University: Parcels 1 and 4-6

- Create a "landmark" cultural or academic use facing the Charles River on Parcel 1, together with a state-of-the-art research campus adjacent to BU on Parcels 4-6;
- Create a small park and landscaped buffer adjacent to Audubon Circle and new paths to the Charles River; and a lively pedestrian realm along Commonwealth Avenue and Beacon Street.
- Set taller buildings back from the neighborhood.
- Accommodate the Urban Ring and any other public transportation improvements.

Audubon Circle, Kenmore Square, Fenway: Parcels 7-10

- Locate housing next to Audubon Circle together with a mix of research, office, entertainment, hotel, and similar uses closer to Kenmore Square.
- Accommodate the Yawkey Commuter Rail Station integrated with new buildings and connected to Beacon Street by a lively public square.
- Locate and design buildings to link nearby neighborhoods to Kenmore Square along Beacon and Brookline Avenue.
- Scale buildings up from the neighborhood toward Kenmore Square.

Fenway, Back Bay : Parcels 11-15

- Maintain the natural northern exposure for the historic Fenway Studios.
- Emphasize housing and other low-traffic generating uses, with careful attention to transportation improvements and impacts in this highly congested area.
- Line public sidewalks with shops and other pedestrian-friendly uses along Massachusetts Avenue and Boylston Street —avoiding internal retail malls.
- Accommodate waiting and lobby facilities for Green Line and bus patrons.
- Create no more than one taller building (over 15 stories) in these districts.
- Respect the Back Bay Historic District.

South End, Bay Village, Back Bay: Parcels 16-19

- Emphasize housing and other low-traffic generating uses, again with careful attention to transportation impacts.
- Line Clarendon Street, Columbus Avenue, Berkeley Street, and Arlington Street with a mix of shops and other uses that engage pedestrians—avoid internal retail malls.
- Provide no more than one taller building (over 150') in these districts, and carefully scale buildings up from historic neighborhoods to preserve sunlight for Bay Village (which is located to the north of these parcels).
- Explore the opportunity to link building on a potentially very valuable site (Parcel 16) to support creation of a neighborhood park on Parcel 18.
- Respect the South End Landmarks District and the Bay Village Historic District.

Bay Village, Chinatown, South End: Parcels 20-23

- Emphasize housing, a park, and other public and community uses that reinforce livability and provide economic opportunity for Chinatown and nearby dense neighborhoods, carefully considering traffic impacts.
- Link Chinatown to the South End with a mix of shops, a park, and other uses that engage pedestrians along Shawmut, Washington, and Harrison Ave.
- Scale building height away from the historic row houses of Bay Village.
- Explore opportunities to create a mix of market and affordable housing, which would require taller buildings.
- Respect the South End Landmarks District and the Bay Village Historic District.

Planning and Design Issues (page 26)

- **Hotel** floorplates for the types of smaller hotels that would be appropriate on most Air Rights parcels generally range between 10-15,000sf per floor to accommodate cost efficient numbers of rooms per floor and building widths that generally do not exceed 60' to allow sufficient light and views for each room. The minimum likely size for these hotels would be 150 to 200 rooms given market conditions that have prevailed in recent years. These parameters would translate into a minimum requirement of 10 to 15 floors to accommodate guest rooms; one floor for lobby and street level retail; one or more larger floors to accommodate restaurants, function rooms, and back of house spaces; and three to five floors to accommodate parking and servicing. The minimum building height would therefore need to be in the range of 15 to 23 floors to create a hotel on air rights. Each site and hotel operator is unique, a parcel and operator which both supported particularly high values may be able to be more flexible in terms of minimum number of rooms, floor layouts, and other factors.
- **Office** floorplates are far larger, reaching 25,000sf or more with far more flexibility regarding the depth of floors. The minimum likely size for an office building that served as the primary use on an air rights site would probably be 250-400,000sf to attract major tenants and support marketing and other operational costs. An office building that fits these parameters would translate into 10 to 15 floors of office space, one floor for lobby and street level retail; and three to five floors of parking. The minimum building height would therefore need to be in the range of 14 to 21 floors.
- **Housing** floorplates can be smaller than hotel floorplates, ranging from as much as 15,000sf to less than 10,000sf, and considerably smaller for very high value residential. While it is difficult to identify a minimum size, it is likely that developers would not choose to develop less than 50 to 75 units, given the costs of marketing etc. The resulting minimum project size may therefor range from less than 100,000sf to 200,000sf or more. While housing projects could be much smaller than hotel or office projects, the value per square foot of residential space is particularly enhanced by height. The development team that proposed the Boylston Place project for Parcels 11-13 projected that per square foot values of condominiums were twice as high for the top floors (of a 49 story proposal) as for the lower floors. Because higher floors carry greater per square foot values, the total number of square feet required is reduced and ironically for condominium projects, increased height can translate into lower total building area.
- **Research and Development** floorplates vary according to the type of research, but can readily exceed 20,000sf. At the same time, most R&D tenants do not seek tall buildings, and overall height can often be held to 150'. Floor to floor heights are often higher, particularly for laboratories, resulting in fewer floors and less square footage than a comparably tall residential, hotel, or office project. Parking requirements can also be lower because these buildings often have fewer employees per 1,000sf and more space devoted to equipment.

WORKING DRAFT

TRANSPORTATION GOALS (Page 27)

The TWG's analysis was based on the following goals for the corridor:

Develop community-based transportation strategies that protect and enhance the quality of life that is unique to the neighborhoods adjoining the Boston Extension of the Turnpike.

- Protect and enhance the residential scale of the streets that are part of the fabric of the surrounding neighborhoods. Recognize and celebrate the distinct character of Chinatown, Bay Village, South End, the Back Bay, Fenway/ Kenmore Square and Allston-Brighton.
- Protect the residential neighborhoods from transportation-related noise and air-pollution. Protect the residential neighborhoods from inappropriate parking pressures. Utilize as opportunities existing assets like excellent transit and walk-to-work connections.
- Recognize the need to plan for special events like street-fairs and parades.

Develop a transportation vision that works in tandem with the larger *civic vision*.

- Create a pedestrian friendly street environment that is safe and conflict-free.
- Enhance and encourage the use of public transportation including shuttles.
- Provide efficient vehicular access for residents and businesses.
- Alleviate congestion and improve traffic circulation.
- Encourage the use of bicycles.
- Address off-street and on-street parking concerns.
- Make the most efficient use of the regional transit and highway systems to reduce congestion on local streets.

Develop strategies to keep regional traffic in the regional highway system and local traffic on local streets.

- Identify regional travel "attractions" and "destinations."
- Establish local travel routes.
- Include roadway/highway/transit infrastructure proposals outside the corridor which have an effect on travel patterns.
- Identify options and alternate routing for region use.
- Include a "toolbox" of implementable and appropriate measures such as traffic calming, congestion pricing, premium user pricing.

Develop strategies to manage the cumulative transportation impacts of air rights and other development.

- Consider the effect of various "build-out" scenarios for all planned development projects within and outside the corridor.
- Include highway and transit initiatives.
- Examine ways to have development owners to coordinate amongst themselves to share transportation related facilities.

MEMORANDUM

To: Community Residents and Business Owners

From: BRA Randi Lathrop RL

Date: February 18, 2000

RE: *Vision, Context & Transportation* portions of the Strategic Development Study for the Boston Extension of the Massachusetts Turnpike Air Rights

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Attached you will find the *Vision, Context & Transportation* portions of the SDSC report.

The final public meeting of the SDSC will be held:

Strategic Development Study Committee

Thursday, February 24, 2000
The Franklin.
11 East Newton Street, South End
[Use the 2nd Entrance. The Franklin may be reached from Bus 49 or the Orange Line.

- Take Bus 49 along Washington Street to Blackstone and Franklin Squares.
- From the Orange Line, walk South on Dartmouth Street (will turn into West Dedham) to Washington Street. Turn right on Washington and walk past Blackstone and Franklin Squares.

The Franklin overlooks Franklin Square. Turn Left on East Newton Street. You will recognize the building as the hospital from the television series "St. Elsewhere."]

At this meeting, we will discuss these documents. Following the meeting, there will be a 10-Day public comment period until 5 p.m., March 6, 2000. Public comment must be written and sent or faxed to:

David Lee
c/o Randi Lathrop
Boston Redevelopment Authority
One City Hall Square, 9th Floor
Boston, MA 02201-1007

Via FAX: (617) 742-7783

Please do not send public comment to Goody, Clancy & Associates. Once comments are compiled at the Boston Redevelopment Authority, they will be forwarded to the Strategic Development Study Committee and Consultants for review.

MEMORANDUM

To: Community Residents and Interested Citizens

From: Randi Fabiano

Date: February 18, 2000

Re: Dalton Corridor & Transportation Planning of the Substation Development Study for the Boston Redevelopment Authority Transportation Department

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Attached you will find the Dalton Corridor & Transportation Planning of the SDSC report.

The first public meeting of the SDSC will be held:

Thursday, February 24, 2000
The Franklin
11 Ray Newton Street, South End
(Use the 2nd Entrance. The Franklin may be reached from Ruggles or the Orange Line.

- Take Bus 19 along Washington Street to Dartmouth and Franklin streets.
- From the Orange Line, walk South on Dartmouth Street (will turn into West Dedham) to Washington Street. Turn Right on Washington and walk past Massachusetts and Franklin Streets.

The Franklin is located in Franklin Square. Turn Left on Ray Newton Street. You will recognize the building as the hospital from the television series "St. Elsewhere."

At this meeting, we will discuss these documents. Following the meeting there will be a 10-Day public comment period until 5 p.m., March 6, 2000. Public comments must be written and sent or faxed to:

David Lee
c/o Randi Fabiano
Boston Redevelopment Authority
One City Hall Square, 9th Floor
Boston, MA 02201-1007

Via FAX (617) 742-1783

Please do not send public comment to Cloud, Clancy & Associates. Other comments are compiled at the Boston Redevelopment Authority, they will be forwarded to the Transportation Development Study Committee and Consultants for review.

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